

THE AMERICAN BEE JOURNAL

Devoted Exclusively to Bee Culture.

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Editor's Table.

☞ Some one, by mistake, carried off the U. S. Mail hat of E. D. Godfrey, Red Oak, Iowa, while at the Convention at Burlington, Iowa. The one who found it in his possession should write friend Godfrey—address as above.

☞ New York city folks have the bee fever, and a great many hives are being sold there. Friend King keeps a lot of colonies on the roof of his office, from which he makes daily sales. The Thurbers have also disposed of several consignments at a price ranging from \$10 to \$12 each.

☞ The past month has been very discouraging to bee-keepers all over the country. It has been universally cold and wet. If it clears off and becomes warm now, all will be well. If not, we fear the honey harvest will suffer considerably. The weather has retarded queen rearing, and as the pleasant and promising weather of April caused orders for queens to rush in very fast, almost all queen breeders are behind with their orders—and purchasers must have patience with them. The latter can no more control the weather while rearing queens than can the former while trying to produce honey. We must all exercise patience now.



Prof. Cook's New Manual.

This work is now out, and all orders, heretofore sent us, are filled. Should we have made any mistake, or failed to send as ordered, we shall be glad to make amends if informed of the fact. Being a great undertaking, many delays have occurred, even where least expected; but we feel sure all such will be overlooked when the book, so neat and elegant, is received. Just as we go to press, the following Review from that ripe scholar and critical observer—the Rev. O. Clute, of Keokuk, Iowa, comes to hand, and we give it in its entirety:

When Prof. Cook's first "Manual of the Apiary" appeared it supplied a want which had been felt for some time among our bee-keepers. The old standard works of Mr. Langstroth and Mr. Quinby did not, of course, deal with the apparatus and the methods that have been invented or discovered since they were written. So many new and valuable things have been invented for the use of the bee-keeper, and so many improved methods have come into practice, that a work which should treat of these clearly and briefly was much needed. This need Prof. Cook's small Manual, to a large extent, supplied. That the Manual was appreciated is fully shown by the fact that so large a number of copies were sold. Practical bee-keepers, too, have generally commended it as a valuable addition to the literature of bee-keeping. It was impossible, however, in the compass of so small a work, to treat the subject fully. Some important points were presented very briefly, other points, nearly as important, were scarcely mentioned at all. Doubtless, it was the desire to remedy these defects that led Prof. Cook to revise and enlarge his work in this second edition. It now comes before us "revised, enlarged, mostly rewritten, and beautifully illustrated."

As we read the book, it is plain that it has been written out of the author's enthusiasm for a pursuit which for many years has given him much pleasure. There is a certain warmth in many of the sentences, now and then rising to intensity, which indicates a glow in the writer which could have been roused only by a real devotion to the work. Enthusiasm always gives an attractive flavor to conversation. It is equally attractive and desirable in books.—The writer, whose words are warmed by his own earnestness, is sure to rouse an interest in his readers. It is safe to say that but few who read Prof. Cook's book will lay it down without desiring to own a few colonies of bees for recreation; probably, many readers will desire to engage in it as a regular calling, hoping to achieve a success as gratifying as that of Mr. Doolittle, Capt. Hetherington, or Mr. Harbison. Prof. Cook's enthusiasm is not that of a tyro.—He has kept bees for years. He has experienced failures as well as successes. The failures have only set him at work to learn the causes of failure. Year by year, through success and failure, he has come to wide

experience and accurate, practical knowledge, which appear on every page of this work.

In writing a treatise on bee-keeping, this practical experience is essential, but it is not the only essential. Scientific knowledge is also needed; thorough familiarity with the structure and habits of the bee.—It is fortunate, for those of us who are to be helped by his work, that Prof. Cook brings to that work a careful, scientific training, and a special skill in observing the bee, derived from several years of careful labor in making observations of his own. In his second chapter, on the anatomy and physiology of the honey bee, he has, indeed, availed himself of the able labors of his predecessors in this department, but he has also been a student himself, has verified the observations of others and supplemented them in some degree by his own. And in the sixteenth chapter, on honey plants, his scientific knowledge of botany has enabled him to give us a better statement concerning the plants from which the bees collect honey than has been made before by any writer.

Unhappily, practical knowledge and scientific training do not always give to their possessors the skill to write the English language with force and elegance. Of this fact Prof. Cook is, to some extent, an example. The style of this second edition is much better than that of the first, but this is not above criticism. Still, all who have an interest in bee-keeping will be so glad to welcome a practical book that is up with the times that they will willingly overlook an occasional faulty choice of words, or loose construction of sentences. In its practical aspect, Prof. Cook's book is exceedingly valuable. His long experience as a teacher enables him so to present his subject that one who has never kept bees, and who has never visited a practical bee-keeper and seen his methods of work, can, if he has average intelligence, learn the theory from this book with sufficient accuracy to keep bees with success. All the practical operations of the apiary are presented in such way that all persons who have a constructive imagination can, as it were, actually see the work going on before them. This, we take it, is the real object of such a book. Success in this direction comes from the possession of the teaching faculty. It is because so many writers do not have this faculty that books intended to aid learners, in various kinds of practical work, fail in accomplishing their purpose. Prof. Cook has the spirit of the teacher. He so approaches his subject, so explains and illustrates it, that the reader is interested and instructed.

The numerous illustrations serve an excellent purpose. A picture of an unfamiliar object will give us instantly a better idea of it than pages of words. The illustrations are usually good, but now and then the artist is at fault; for instance, the queen-cells on page 109 cannot be called a success.

The publishers have done their work well. It is a real pleasure to take up a book that is printed on such fine book paper, with good clear type. The binding, too, is neat, so that the book presents an attractive appearance to the eye. It is a book which does credit to

our calling; a book which every bee-keeper may welcome as a fit exponent of the science which gives such pleasure to all who are engaged in it. O. CLUTE.

Keokuk, Iowa, 20th May, 1878.

Peculiar Sliding Bottom-Board.

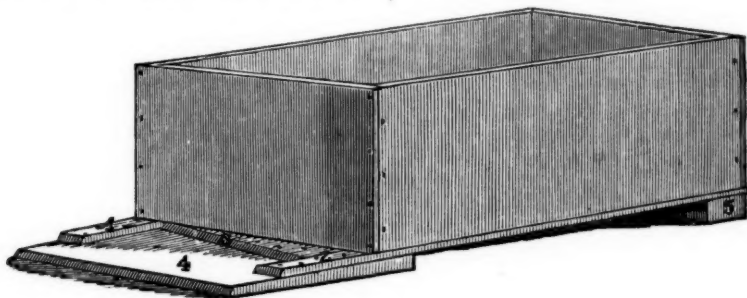
Friend Gordon has sent us the following description of his detached, sliding bottom-board:

It is composed of 5 pieces, viz: One central piece, numbered "3" in the drawing; two side pieces, numbered "1 and 2;" and two battens, numbered "4 and 5;" the fronts of 1, 2, 3 and 4, are beveled back to make the ascent easy; and number 3, (the central piece,) is cut slopingly, beginning on the short side at $18\frac{1}{2}$ inches from rear end, and making it as long on the long side as the piece will allow. Thus you will perceive, from the length of my hive, that when the hive is pushed back even with

"simplicity hive," to which we have very serious objections. At all events, friend Gordon is entitled to credit for working out the simple arrangement.

The two slides, as shown on another page, in connection with the new Langstroth hive, for controlling the entrance is a much superior arrangement.

California will ship only extracted honey hereafter, the freight and breakage being so much as to make it unprofitable. This leaves the production of comb honey to the Eastern and Middle States. They ask 10 cents per pound for extracted honey in San Francisco, and as it costs 3 cents per pound to bring it to Chicago, that fixes the price, in bulk, at 13 cents here.



Detached Sliding Bottom-Board.

the rear end of bottom board, all entrance to the hive becomes closed; and as you draw the hive forward, the entrance-way gradually enlarges, until, when the hive is drawn forward to the end of the side pieces, you have an entrance-way of $10\frac{1}{2} \times 9\frac{1}{2}$ inches. This does away with entrance blocks, and all cuts into body of hive, for purpose of entrance, which I regard as quite objectionable. We have 120 colonies, all doing well.

Wm. L. GORDON.

Shreveport, La., May 13, 1878.

Particular reference to the cut and the above description will enable any one to see the design and arrangement. The sizes of the pieces of wood composing it are as follows:

No 1 and 2 pieces,	$2\frac{1}{2} \times 3\frac{1}{2} \times 24$	inches.
" 3	$10\frac{1}{2} \times 9\frac{1}{2} \times 22$	"
" 4	$8 \times 1\frac{1}{2} \times 15\frac{1}{2}$	"
" 5	$2 \times 3 \times 15\frac{1}{2}$	"

The moving of the body of the hive to control the entrance, we think quite objectionable. If we did approve of it, we should like friend Gordon's plan better than any other we know of. It is much better than the arrangement recommended for the

FASTENING COMB FOUNDATION.—Friend W. W. Moore has sent us a little model showing the way he fastens comb foundation into the frames. It consists in having the top-bar in two pieces, and when put together it holds the foundation very firmly. Several have been using a similar plan for fastening it, and it works well.

Adams Station, May 15, 1878.

"Will you please state in the next JOURNAL the objections, if any, to hives in which the frames run from side to side, instead of from end to end."

THEO. F. C. VAN ALLEN.

[One of the greatest objections is, that no matter how much you may desire to tip the hive a little to the front, to let water run off, &c., it cannot be done when frames run from side to side. When they run ends to the entrance, all can see that it is much easier for bees to get to any comb desired, without interference from bees from other combs.—ED.]



Honey as Food and Medicine.

It is gratifying to know that our efforts in the direction of increasing the demand for honey, by publishing the little work with the above title, has met with such a hearty endorsement by the honey-producers of the country. The first edition is exhausted, and we shall issue another edition immediately, and at the same time print it also in German, for the use of the German-speaking population of our country, friend Claussen having kindly translated it for that purpose.

The Rev. J. W. Shearer, of New Jersey, in acknowledging its receipt, says:

"To me, its receipt was very timely. We were hunting receipts under the first head and authority under the second. The impetus given sugars by improved refining of modern times, and the strides of medicine from chemical discoveries, have caused honey to be too much overlooked in these lines. We believe honey will gradually recover something of its former standing medicinally, despite new medicines, and become again the favorite among sweets for many uses."

The many congratulatory letters we have received show that such a pamphlet was imperatively demanded. We discovered some imperfections, which will be corrected in the second edition. Our friends who so kindly sent in receipts after the first edition was published, will find them in the second.

Speaking of our lecture on this subject, at Burlington, Iowa, by request of the Western Illinois and Eastern Iowa Beekeepers' Association, the Burlington *Hawkeye* says:

"The meeting in the evening, to listen to the lecture of Mr. T. G. Newman, editor of the *AMERICAN BEE JOURNAL*, Chicago, was not as large as it might have been, owing to the slight thunder storm and the threatening aspect of the weather. The audience was well entertained, however, by a fluent and easy speaker, who showed not only great knowledge of his subject, but much enthusiasm in bee culture. His subject, 'Honey as Food and Medicine,' was treated very gracefully, both in its historical and hygienic aspects. The speaker referred to the ancient history of this delightful viand, showing how profusely it was used in daily life, and even in religious ceremonies, among the foremost nations of antiquity. He then passed to a physical and chemical examination of the nature of honey, and of the different scientific methods of obtaining it in its purity. He then showed its healthfulness as an article of food, and its great superiority over sugars and syrups. Lastly he spoke of it as a medicine, showing its peculiar efficacy in various diseases, especially those of the lungs. The lecture showed a great deal of studious thought. The strict attention which his audience paid to it was evidence of their appreciation of it, as well as of its merit."

Reed City, Mich., May 23, 1878.

"I send you a case of Honey Boxes, which I wish you would examine and comment upon through the columns of the *JOURNAL* for June, if they reach you in time. I have never seen anything of the kind yet, and so far as I know, the plan is original with me. You will observe that the box is made of *one* piece of timber, 3 mitre slots are cut across the piece, grooved for the glass and guide, and then steamed and bent. These boxes are not as *perfect* as I expect to make, my machine not working exactly right yet; but you will get the idea. There is only *one* corner to nail, instead of 4; they are much handier for glassing and putting in separators."

THOMAS T. DELZELL.

[Yes; this *is* something new, and when the machine is perfected sufficiently to do true and smooth work, it promises to be of value.—Ed.]

SMOKERS.—Levi Sutcliffe, of Charles City, Iowa, has sent us a new smoker, of his invention. It is some 3 or 4 times the size of ordinary smokers, and it is unlike any of them in form, size, springs, revolving curved tube, &c., &c. It works with slow stroke, and will keep ignited for hours.—Being so large, it is rather difficult to handle, especially where one is not used to it. Friend Sutcliffe has certainly *not* copied any other smoker. It is original.

Friend King has sent us one of his smokers. It is the same size and shape, both of bellows and tube, as the Bingham standard. Its peculiarity, the cut-off slide, makes it work very hard. The connecting parts are the same as the *old* Quinby. It is cheap, but *not* as nicely finished as the Bingham—the price would not admit of it. A cut of it may be seen on advertising page xiii.

We have received a small drawing of a Continuous-blast Smoker. It consists of the ordinary tube and bellows with an elastic rubber bag attached to the bellows to receive the wind and convey it to the tube continuously. We should think it rather awkward, however.

☞ The *Rural New Yorker* comes to us enlarged and otherwise improved. We always welcome it. It is one of our most valuable exchanges. We wish it abundant success.

☞ We have received L. C. Root's new circular for 1878, and J. H. Nellis' new price list. Both are well gotten up and contain valuable information to purchasers of supplies.

EVERETT'S EXTRACTOR.—By reference to our advertising columns, it will be seen that friend Everett has found it necessary to advance prices on his Extractor. He has improved it considerably since the first was made, and so had to increase its price. In his Circular and Price List he remarks as follows :

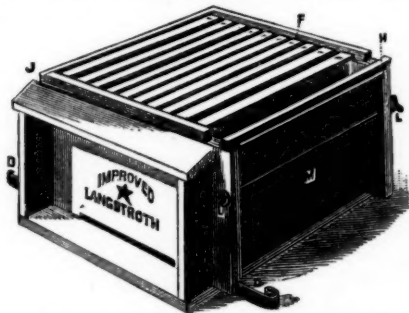
"As I put heavier stock in the cans than I first intended to do, besides making several other valuable improvements, in order to make it a No. 1 machine, which I can warrant in every instance, I was obliged to raise my price a little, and still I claim to have the cheapest Extractor, all things considered."

The little Comb basket will be very convenient to any apiarist. We were well aware that the price was too little, as at first stated, and think friend Everett is fully justified in raising it.

The New Langstroth Hive.

The fact that 80 per cent. of the bee-keepers of the United States are now using or are preparing to use the Langstroth hive, is strong proof that it is the "coming hive," for universal use.

The strongest argument against this hive was the difficulty in manipulating it—there being no movable side, and many have tried to invent something to cover this want—but



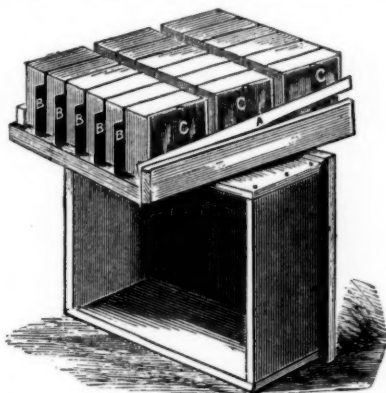
so far nothing has given universal satisfaction.

In the present instance, Sperry & Chandler, manufacturers of the North-Star Hive, have combined the peculiarities of it with the Langstroth, and by so doing will bring it into very rapid use. It is correctly represented by the cut.

Many are advocating a loose bottom board, but this hive obviates that difficulty. By simply turning the thumb-screw, L, and opening the movable side (which takes but an instant), the frames can be examined, and

by removing the loose side-board, M, the bottom-board may be cleansed—giving all the advantages claimed for a loose bottom-board, without its disadvantages.

The New Langstroth Hive is peculiarly adapted for the production of comb honey—its honey rack is the best in use, and is perfectly adapted to the use of the prize boxes. It holds 18 prize boxes, with the separators between, marked B B in the cut. The wedge



(A) holds all with a vise-like grasp. The outer boxes are glassed as they stand on the hiv (C C C). By removing the wedge (A) any box may be instantly removed, examined, returned, or replaced by an empty one—the spaces between the rows readily admitting the fingers for that purpose. They are adapted to 3, 6, 9, 12, 15 or 18 honey boxes.

It is simple, durable, and withal cheaply constructed, as will be seen by figures given elsewhere in this number.

We have ordered a number of them, and hold ourselves ready to ship immediately either material cut ready to nail, or nailed ready for painting and use. As railroad companies always mar the paint, it is far better to ship before painting, and thus have them look fresh and neat when first used. They are adapted either to the production of comb or extracted honey, and can be supplied in any shapes or quantities desired.

☞ We have an inquiry as to the standard of excellence of Italian bees, and would like those who are experts to send us in clear and concise language what they consider such standard. We ought to settle upon it, and must before long. "Now is the time, and this is the place." Let us agree upon a standard.



CARRYING THE WAR INTO AFRICA.—John West, Esq., 877 West Monroe St., Chicago, writes: "DEAR EDITOR.—I send you an extract from my friend Mr. Arthur Todd, an English gentleman, who has commenced bee-farming in French Africa. He has, to my knowledge, read the works of the best authorities on the subject published in England, France and Germany. This renders his opinion of the merits of your BEE JOURNAL more valuable. I send him the BEE JOURNAL every month. I extract the following from his letter, dated April 16, 1878:

"Bldah, Algeria, French Africa.—Many thanks for all your help. The AMERICAN BEE JOURNALS are of more practical use to me than all the other books I have. Please send me 'Cook's New Manual,' as soon as it is out."

"Heap-by-Cheap" Goods.

Cheapness generally means inferiority! Indeed, a recent writer sagely remarks that excellence and cheapness cannot go together, and we would save ourselves much annoyance and disappointment by recognizing and remembering the fact. He adds:

The house which the contractor builds too cheaply will invariably have weak walls, woodwork that will shrink at the corners, plastering that will drop off, and paint that will crack. How can it be otherwise? The builder will not make a present of good work and good materials to his patron; cheap work will be given for cheap pay. The tailor will not put good material and skilled labor in the suit of clothes which looks as good as the best, but is sold at a price far below what is asked for the genuine article. It cannot be done, and it should not be expected; but rather those who are compelled to buy cheaply should philosophically make up their minds to bear the consequences that must follow cheap purchases. The cost of anything, and consequently its value, is measured by two things: quality of material and the labor employed to make it. These in turn may be superior or inferior.

In consequence of the demand for cheap articles, our stores are full of inferior goods. Furniture made of unseasoned wood and hastily glued together; musical instruments that are mere varnished cases with the imitation of keys, strings and reeds for interior mechanism; silverware with a varnishing coat of shining gloss; jewelry that is fair to look upon, but is hopelessly tarnished by use; clothing that presents a fair exterior, but that rips and fades and loses shape when worn; gloves that gape at every seam at the first wearing—these, and innumerable other constantly recurring instances of inferiority, impress upon us the fact that, ordinarily, cheap things are the dearest.

The cry for cheapness some time since reached the bees—dollar queens are the result—squeezed a little, and in quantities, cheapened to 90, 80 and 75 cents!

As a consequence, the country is filled with degenerated stock. This dollar queen business—an everlasting disgrace to the one who introduced it—should be everywhere frowned down, with grape sugar for feeding bees, glucose for honey, and paraffine for beeswax!! Begotten by the degeneracy of the times, brought into being by selfishness and avarice, it has ripened into a sad calamity, which like a pall overhangs the whole of bee-dom.

While some are charging \$4 for home-bred queens, at this season of the year, others are offering *imported* queens for \$3.75 each! What can the purchaser expect as a result of obtaining such stock? Do stock and chicken fanciers encourage such reckless economy? It behooves all to ask themselves the question—whether these exceedingly *cheap* purchases are not usually the dearest in the end?

Morris Ellis, a farmer living near Georgetown, in Vermillion county, started home from Vermillion Grove, the other day, with eight stands of bees in his wagon. The bees grew very angry, doubtless from the jolting of the wagon, and in a solid mass lit upon the horses and driver. The horses did not attempt to run, but lay upon the ground and rolled in terrible agony. Both horses have since died, and Mr. Ellis lies in a very critical condition, and is not expected to recover.—*Vermont (Ill.) Chronicle.*

Isn't it strange that Mr. Ellis did not know enough to fasten up the entrances before removing bees? It was downright presumption. Spirits of turpentine is a good application to cure bee stings.

A model of a swarm hive is at hand, from F. R. Davis, Wolf Lake, Ind. It is so arranged as to prevent the queen from going out with the swarm. On their return, finding "her majesty" in the hive-box, they cluster on combs attached to movable slides above. Their weight will open a space for the swarm to go up into the empty hive above, which will work out on a different side from the old colony. We have placed the model on our Museum shelves, to be examined by our visitors.

H. O. Wright, of Lodi, N. Y., says a man, by the name of Miller, has patented the Quinby hive, and claims a royalty of him for making and using it after he has been using it for 5 years. This is one of the abuses of Patents, and will be obviated by the new law. Miller may annoy, but cannot hurt any one for using the hive.

Patents—Something about them.

It is estimated that the people of the United States reap yearly from patented inventions the sum of four thousand millions of dollars. Yet the inventors have barely reaped from these inventions enough to pay for their board and clothing, if it was equally divided among them. This shows our Patent Laws are defective. Old patents, which have never been put into use, and are almost unknown, because not sufficiently perfected to make a practical machine, are raked up by patent sharks, (rarely inventors), and galvanized into life by a re-issue, and sprung like a trap on the good invention and those using it. To correct this, there is now a bill in Congress providing that any man who has bought a machine before such a re-issue can not be prevented from using it by one of these galvanized patents, under a claim the old patent did not contain.

The bill also provides that all patents shall pay a fee of \$50 five years after its issue, and another of \$100 five years thereafter; and in case the fee is not paid, the patent expires, thus making the owner sit in judgement on his patent after he has had time to cool down the ardor of his first love. The bill also provides that in suits for infringements, where the prosecution has been for extorting money under claims obviously unjust, the court may make the person bringing the suit pay, not only the ordinary costs, but the whole costs of defendants counsel, and witness and expert's fees. With these corrections to our patent law, no man need suffer at all from unjust claims or extortions of patent sharks.

In *Gleanings* for May, page 161, it is implied that W. J. Andrews had lost the use of his arm from bee stings. Friend Andrews wants that corrected. It was the result of a pistol shot in 1878, and bad surgery.

H. Scovell, Columbus, Kansas, has sent us a sample of his all-wood queen cages. Saw cuts take the place of wire-cloth. An auger-hole supplies the place for provisioning. They are exceedingly neat and cheap, and can be obtained at this office, price 5 cents, or 50 cents per dozen.

Thurber & Co., of New York, have sent 2,761 barrels of honey to Liverpool; it was sold on the 17th ult., as we see by a Liverpool paper.

MELLIOT CLOVER.—In answer to many inquiries, we repeat: Melilot clover may be sown any time. Four pounds will sow an acre, and it may be sown with grain. It stands drouth and frost, and grows in any soil—north, south, east or west. An acre will support 20 colonies. It blooms the second year and then dies.

There has been so much call for teasel seed, we have procured some, which we can sell for 75 cents per pound.

We have one of Barnes' Hand Circular Rip Saws, which works like a charm. It will rip any lumber with the greatest of ease and exactness.—The reader is referred to our description of it on page 105 of the April No.

Chattanooga, Tenn., May 15, 1878.
 "What effect will the late cold spell have on the honey production north of the Ohio River this season? Also what is its effect upon fruit and grain crops? Please inform us through the JOURNAL."
 S. C. DODGE.

[Unless soon ended, the cold and wet weather will greatly damage honey production. Fruit and grain were not seriously affected—only small plants were killed by the frosts early in this month.—Ed.]

The queen that friend Andrews offered for the best essay in the Southern Department, was awarded to Oscar F. Bledsoe, Grenada, Miss. In acknowledging it, he remarks:

"Your offer through the AMERICAN BEE JOURNAL has been handsomely fulfilled."

Friend McGaw wrote us a few days ago that on opening a colony, he found some white-headed drones. We have heard of red headed ones before, and now we have the "grey-headed" fellows. We always thought they died too young to ever become *grey-headed*, but it seems their extreme youth does not in this instance save them for hoary-headedness. Friend McGaw promises to send us some to mate with our Cyprian queen, which we drew at the Burlington Convention. "Won't that be jolly?"



Humbugs and Swindles.

In *Gleanings* for May, Novice attacked J. W. Winder's honesty. We wrote Chas. F. Muth, of Cincinnati, who has long been intimate with him, and he assured us that Mr. Winder was honest, but had met with reverses, and was *unable* to clear up some business matters. Novice mis-stated the amount and ungenerously magnified \$10 into \$30, in his zeal for a fight. As Mr. Winder asks to be heard in self-defense, we cheerfully give place to the following explanation:

My attention has just been called to an article in the May number of *Bee Gleanings*, under the head of "Humbugs and Swindles," in which I am arraigned for not paying one J. P. Parker \$30. The statement in the first outset is a falsehood. I never owed Mr. Parker one cent, personally, as stated, but we did owe him under the firm name of Gray & Winder.

The queens could not be procured as proposed, on account of the unsuccessful importation made by Mrs. E. S. Tupper & Savery. Some time after this failure to procure the queens for Mr. Parker, I made satisfactory arrangements with him for a settlement. I was to send him \$15 in three payments of \$5 each. I did send him \$5 at the time, some 5 years ago; and from that time to this I have not heard one word from him. About this same time I received a letter from the editor of *Gleanings*, threatening me if I did not settle up, &c., with Mr. Parker.

I stated to him, by letter, the arrangements I had made with Mr. Parker, and that we needed none of his interference; we were able to attend to our own business, &c., and that if he did publish me in the *Gleanings*, that I would not pay any more.

He did make some false statements in his paper in reference to me, which were calculated to injure my standing and character among persons that did not know me; and as I consider and always try to *make my word good*, I have not paid any more on the \$10, (not \$30, as stated).

I supposed he had had \$10 worth of malicious satisfaction out of the course he had pursued, and so I called the account square, and think I am justified.

Novice is down on thieves and swindlers. Let me ask who has appropriated and copied my curved pointed, uncapping knife? Who has copied my cuts and appropriated to his own use and sale my Swiss or Gerster wax extractor, that is so highly recommended in *Bee Gleanings*?—As long as I manufactured and advertised the curved pointed knife, he always spoke of it as of no consequence. Now he makes and highly recommends it for uncapping, and the wax extractor he highly recommends for getting out wax, &c., but he fails to hint who he purloined them from.

If a man proposes to reform the world, I think it poor policy to preach one thing and give it the lie in the practice. Brother, you had better drag the mote out of your own

eye, and then you can see more clearly how to pluck it out of your neighbor's eye.—"Let justice be done though the heavens fall," if it does appear hard on those that go nosing about, appropriating bee appliances and other peoples' business to their own use, and making false statements under the hypocritical cloak of right and justice to all.

J. W. WINDER.

Terre Bonne, La., May 20, 1878.

Bee-keeping in Western Michigan.

We clip the following statement in regard to bee-culture in Western Michigan from the columns of the *Barry County Sentinel*:

The business of bee-keeping has become one of importance in Michigan, and many gentlemen in various sections are giving it a great deal of attention. Among those who have been quite successful is W. L. Cobb, of Middleville, who has made it a study for several years, and now has all the modern appliances and improvements. He has lately purchased a foundation machine, intended to use for moulding out of wax the foundation for comb with which to fill the hives of new swarms. This plan saves a great amount of labor for the bees, and in many instances they will have the hive nearly filled with honey, where in the ordinary manner they would still be building comb. Bee-keepers should look up these new improvements and adopt them when they are evidently beneficial. Marceus Wright, of the same place, has also been eminently successful with his apiary.—During the past year his yard has been an object of curiosity, there having been at one time 230 colonies within one enclosure. He has an improved method of packing his hives for winter, which has been found a safe manner of carrying them through the long winters without loss. It is worth one's time to travel many miles to visit these gentlemen at any time during the season.—Mr. Wright has become so used to the bee stings that it seems as though he rather likes them; at any rate, at the time when strangers would be driven from the yard by these little fighters, he walks among them fearless and unconcerned. They either leave him alone, or else they have learned from experience that they cannot hurt him.

CHINESE MUSTARD AS A HONEY PLANT.

—Perhaps one of the very best honey producing plants is tall Chinese mustard. It remains in blossom a very long time, seems to yield honey continuously, is equally vigorous to resist drought, or wet, and flourishes in all soils. It may be sowed any time from May 1st to middle of June—the earlier the better. It will seed itself—its greatest drawback; yet, it is far less troublesome as a weed than common mustard.—It should be planted in drills, a foot apart, for ease of cultivation. An ounce will plant a space of one rod by four.

We can only fill a few orders for this seed. Price, per ounce, 20c.; quarter pound, 75c., postpaid.

Foreign Notes,

GLEANED BY FRANK BENTON.

Migratory Bee Culture.

One of the questions at the Strassburg Convention, in 1875, was:

"In wandering with bees, what is to be observed in order to obtain a favorable result?"

The subject was introduced by Herrn G. Dathe, of Eystrup, and his remarks are summed up by Herrn Mayerhoeffer, in *Der Bienenvater*, as follows:

"The speaker stated, that in Hanover, where he follows bee culture, migrating with bees is very common. In the spring, the bee-keepers go from the heaths to the marshes, and thence, late in the summer, to the buckwheat and heath localities. He migrates yearly, with an average of 400 colonies to the buckwheat and heath pastures.

"This migrating or wandering with bees is by no means easy; one must observe many points, if, instead of the hoped for benefit, damages will not be brought about. The first condition towards a good result is a good location for the apiary. In the selection of the spot for this purpose, 3 things are to be observed:

1. "Whether the pasturage is good or not. Blossoms do not yield honey alike everywhere, and much depends upon the weather. Then, the location must not be too far from the pasturage; this is particularly the case with buckwheat, hence the saying: 'The bees must have the buckwheat before the entrance.'

"The bees must be protected from the wind and weather, and against the attacks of man and beast; therefore, many migrating bee-keepers like to build closed bee sheds. When a single one is not able to do so, several unite and build a shed together.

2. "The cost. Even with the best of places, the cost is not covered, if the distance to travel is too great: the resulting expenses absorbing the return. One must never base his calculations upon good honey years; but on the contrary, upon medium or really poor years. It frequently happens that one takes his stock away from the heath lighter than when it was brought there. Whoever has not far to go, and therefore has small expenses, will not be held back by such misfortunes, but can try migrating every year.

3. "The hives must be arranged for migrating. The transport-hives must be so constructed that they can be loaded and unloaded with ease, and they must furnish sufficient air to keep the bees from suffocation. Of the basket-shaped hives, the ordinary reversible form is best adapted to moving about. Among movable comb hives, however, the equal chambers. In general, migrating with movable comb hives is safer than with others. The speaker said, that in transporting colonies in boxes he had lost none, which was not the case with those in common round hives.

The fourth point is their transportation—

its manner. That the construction of the hive has an influence in regard to their safety in transporting has been observed, and now comes the consideration of the method of loading and the care during transportation. The means most commonly employed in transporting them are the wagon, the railway and the boat. If one has but a short distance to go, it is much better to take the bees direct by wagon, to their place, for it avoids frequent loading and unloading. Of course, when the distance is great, the railroad is to be used.—Transporting by boat is to be recommended very highly. In loading the hives, they must be so arranged that the corners of the combs are always directed toward the point whence the greatest concussions come; in wagons, toward the wheels; in railway cars, toward the buffers. It should be observed that the accidental sliding of the hives must be avoided by nailing cleats about them. The wagons must not have any standing racks. The best time to transplant them is at night. If, however, one cannot arrive at his journey's end in one night, it is best to stand the hives in a cool place and let the bees fly. Should he be compelled to travel during the day, the bees on board of the cars should be in a cool, covered car; those on boats, under a canvas roof, and ordinary wagons should be covered with cloth. All rough roads, and the paved streets of cities should be avoided, even though it be necessary to go farther in order to do so.

"A fifth point is to be mentioned: The bees cannot remain without watching and attention. This is especially necessary in the spring, because the swarming time occurs then, but less so during the heath harvest. In the latter case, looking to them from one to three times a week answers.

"In closing, the speaker observed that from the remarks it is to be seen that in migrating with bees it is not so easy to obtain a favorable result. But if all conditions for a favorable return are at hand, the greatest return can be obtained in this manner. (General applause)."

In his report of this topic, Herr Mayerhoeffer makes the following observations:

"Migratory bee-culture is the height of rational, improved management. To say anything more regarding its value would be like 'taking coals to Newcastle.' Yet, why is migrating with bees so little known here in Bohemia? (This year, so far as I know, only my friend Summer, in Egerland, tried it; the result was exceedingly favorable, as a surplus of about 20 lbs. per hive was obtained). The first culture of bees in Bohemia was the forest bee culture (*Wald-bienenzucht*), and in this way, the most productive spring and autumn harvests are to be secured. Then in Bohemia 'gums' are used, which are wholly unsuitable for migratory bee-culture; in addition, there exists the superstition that if the bees are moved from the place they will invariably go to destruction. Bohemia is, in consequence of its intersected surface and the resulting division into field and forest, (which, perhaps, alternate more rapidly than in any other country,) very favorably situated for migratory bee culture. If in



the level regions the flowers have disappeared, innumerable sources of honey present themselves among the mountains. With us, migrating seldom occasions great cost or difficulties, since the harvest localities, in most cases, do not lie far apart; indeed, many times they are only a few minutes outside of the range of the bees.—Even from Prague, which is quite distant from mountains, a journey to the heaths takes no longer than $1\frac{1}{2}$ to 3 hours by rail. Finally, I will make one observation:—Would it not be an advantage to the bees to be taken from the dry desert air of the plains into the much cooler, damper atmosphere of the forest?"

BEES wintered well in the vicinity of Paris, and accounts from various parts of Germany show general success in wintering there. From Italy, where the season is of course further advanced, *L'Apicoltore* (Milan) for April, brings the following report: "It is not an inclination to fall into vain laments, but merely as a matter of duty that we state that the bad weather during the past month has destroyed the first honey resources—the rape blossoms and those of the fruit-bearing plants. It is therefore not difficult to see beforehand that swarming will be somewhat late this year and not very great."

ALSACE LORRAINE.—M. Dennler, one of the editors of *Der Bienen Zuechter*, says in the April number:

"A good basis for ample returns during 1878 is laid. Wintering, thus far, has been favorable. From the first of January until the middle of February, continuous, yet not too severe cold weather has kept our little creatures in a normal and beneficial condition of rest. Since the latter date the weather has been growing milder every day; the early days of March appeared as real spring days, and the bees buzzed and carried in pollen as in the month of May. The unpleasant days following have caused no damage. The first cleansing flight took place here on the 14th of February. In the rearing of brood the hives are already tolerably advanced, particularly the straw hives."

Note the statement of M. Dennler's experience with straw hives for wintering. The weather had been cold constantly up to the middle of February, yet he says his hives were well supplied with brood at that time, some having two combs filled to the bottom with sealed brood. Of course colonies located in large wooden hives, having the combs well packed above and at the sides with dry chaff or straw, and the cover raised to permit the escape of damp air, have all the advantages of straw hives for wintering.

PRESERVING EMPTY COMBS.—At a convention in Austria, Herr Gatter, of Vienna, made the following interesting remarks: "While traveling in Italy I met a merchant who showed me a fine stock of empty combs. This was at the hottest time of the year, and, astonished at not finding a trace of moths about his combs, I asked him his secret in preparing them. 'It is to chance

that I owe it,' replied he. 'One day I deposited quite a quantity of scraps of comb in a ware room where there were also some empty petroleum casks. Shortly after this one of my sons, wishing to put something else in the place occupied by the scraps of comb, put the latter into one of the petroleum casks. These combs were forgotten, and a long time afterwards when I found them they had not suffered from the ravages of the moth. Since then I have preserved my empty combs in petroleum casks. If I wish to use them afterwards I first expose them to the open air in order that they may lose the odor of the petroleum. If, after some time, the cask loses its strong odor, one can smear it with petroleum.' A dealer in furniture informs the writer that among upholsterers and furniture dealers the practice prevails of immersing and soaking in naphtha valuable pieces of furniture, in order to prevent moth larvæ from injuring the cloth or wood. One can have a chest or long box to hang his combs in, with a shallow pan containing petroleum in the bottom, and the wood of the box can be thoroughly impregnated with the same, so that if the plan works as indicated, there need be little trouble in keeping empty combs during warm weather.

THE ORIGIN OF BELL-RINGING FOR BEES.—An Englishman told me, some time since, that an English bee-keeper said to him that bees had no ears, and, of course, could not hear. He asked him why he rang bells for them when they swarmed? He answered, that people were not there allowed to cross fields and gardens, but the law provided that a person could do so if he was following a swarm of bees; and the ringing of the bell was to let the occupants of the premises know that he was following a swarm of bees. This is the best explanation of the origin of bell ringing for bees that I have ever heard. S. K. MARSH.
Palo, Mich., May 10, 1878.

Benton Harbor, May 4, 1878.

"What ails my bees?" was the question asked by a neighbor, who lives on the lake shore, and who has, or had, about 15 colonies, 7 of which have gone "where the woodbine twineth," or somewhere else.—Their hives contained plenty of honey, in good and sweet condition; plenty of brood in all stages, no moths nor mold, nor signs of any. They seem to be dissatisfied, and swarm out. One swarm was stopped, returned and queen's wing clipped; but they afterwards went off, leaving but a very few with the queen. They seem to have got the western emigration fever, which is raging this spring. L.

Now is the time to sow the Rocky Mountain bee plant. It grows from 3 to 6 feet high and blooms from July till frost.

J. H. Nellis of Canajoharie, N. Y. will hereafter supply the Van Deusen Bee Feeder at reduced prices.

Correspondence.

For the American Bee Journal.

Bees and Hive-Making in Southern California.

Something over 2 years ago, I was compelled to leave my northern home in Michigan, on account of ill health, and seek a warmer climate. I decided upon California, and chose the southern portion. Ultimately I built a home in this place. My hopes have been realized, in the recovery of my health and finding a delightful climate.

Formerly, my experience in manufacturing machinery and agricultural tools, perhaps, has enabled me to take hold of the mechanical part of the business to advantage; and, possibly, a few ideas of mine may be of advantage to some, for it is through an interchange of views that all business is benefitted. What bee men in California, and in fact all bee men want, is means to do all their work within themselves, as much as possible and to the best advantage.

First, I got me up a hand circular saw, that in manufacturing bee hives is very complete and a great saving of labor, and not expensive to make. I have never yet seen a foot power capable of driving a circular saw to any advantage; besides the strain on a man to use one is unnatural and he can't produce half the power that he can with his hands.

First make a common saw frame, (light,) and a small arbor, not over $\frac{3}{8}$ in. in diameter and $\frac{3}{8}$ bearings, $2\frac{1}{2}$ long; pulley $2\frac{1}{2}$ in. in diameter, and $2\frac{1}{2}$ in. face; use babit or type metal for boxes, run into a shell, or run them in the frame; have a V on one of the bearings, to prevent end play of the arbor. Have a fly wheel, 3 ft. in diameter, weighing 200 lbs.; fasten to its arms a pulley, 18 inches in diameter, $2\frac{1}{2}$ in. face; hang this on $1\frac{1}{2}$ round iron, as long as the frame is wide, bearings on each end. On one end inside the bearings put a 5 in. spur pinnion, $\frac{3}{8}$ in. face and $\frac{1}{2}$ inch pitch. To match and drive this, use a 16 in. spur wheel, hung on a shaft, 1 in. in diameter; to this shaft attach the crank, 14 in. long.—Put the pulley and fly wheel at one end of the frame and the saw arbor $\frac{3}{4}$ of the distance to the other. With this machine, in 12 hours, I cut all the stuff for 100 hives, (Langstroth,) including the movable frames, 10 for each hive, 10x12; bottoms, tops and honey boards, all the cleats, and rabbeted the sides for bearings for the frames, all cut out of wide lumber.

I have made what all who have seen it say is the most complete machine for holding the Langstroth frame while it is being nailed. Take an inch board, $2\frac{1}{2}$ ft. long, and 1 ft. wide. To each end of this, fasten legs so it will stand edgeways, up and down, and 18 inches, from the lower edge to the floor. Fasten to the lower edge a piece of 2x3 the same length; now take another inch board, 10x18 inches, fasten to it across one end, a piece 1 inch square and 10 in.

long. Now, 10 in. from this piece fasten another piece of inch board, 7x10. Now, on this 7x10 piece strike a 10 inch circle and work to it, the center of which will be 12 in. from the first square piece. Through this center put a large wooden screw, and into the center, lengthwise of the first board and 2 inches above the center, up and down, screw it just tight enough so it will admit of the rounded board working back and forth. The lower rounded edge will rest on the 2x3 that was fastened to the main frame or first board. Now, on the No. 2 board, 10x18, between the inch piece and the 7x10 piece that was fastened to it will be, as it were, a sink of 1 inch, oben at the ends; this is to hold the 3 pieces to form the frame; but, as yet, only the top and bottom pieces is held. To hold the sides, take 2 pieces of inch band iron, 2 inches long, and screw fast to the center of this opening, projecting up 1 inch. Now, to clamp and hold the 4 pieces in place, make a button 10 in. long, $\frac{1}{4}$ in. wide and fasten with a screw in the center, turn this button on to the top and bottom pieces. This holds the whole 4 pieces firm, to nail; the sides being held by the pressure against the top and bottom.

To nail them, you have but to turn this No. 2 board (after nailing on one side) up, and nail the top or angle piece; and this No. 2 board is held in position to do this by a spring; turn down and nail the other side. The pieces are all put in position quick, held firm and square, and less than half the time is required to nail a frame than by any other machine I have ever seen. It is very simple and easily made.—I saw my top and angle pieces all in one, which makes a much stronger frame.

And now, one more improvement; or, at least, it is so considered by all who have seen it; yet, some may have a better plan. If so, let us know it. This is a slide to open and close the fly hole in the hive. To make the slide, and guide to hold it, take a piece $\frac{1}{2}$ x1 in., rabbet out from one edge $\frac{1}{4}$ x $\frac{3}{8}$ in., cut off from this a piece for a slide, long enough to cover the fly hole, and another twice as long, and nail to the hive for the slide to work in. The lower edge of the slide will run on the bottom board.—This slide must be put in very loose, so that in wet weather it will work easy. To hold it in position and to regulate it so it will always work, take a strip of tin $\frac{1}{2}$ in. wide, 3 in. long, and with a fine saw cut a slot in one end of the slide, insert the tin, bend it over, and with a small French nail fasten the other end of the tin. This tin is now between the slide and box. Take a small screw eye, and screw it through the slide against the tin; this pushes the tin against the box. With this the slide is regulated, and the eye screw serves as a handle. To close up a hive, you have but to move the slide and turn the screw and the slide is held fast. After the screw has been put in, take it out and file off the point, to prevent its pressing through the tin.

All this may seem but a trifle to some, but those who handle bees much will appreciate its worth.

And now a few words about bees in Southern California: The readers of the



AMERICAN BEE JOURNAL have been informed by its correspondents of the general condition of the bee business here. Some have painted the picture as dark and gloomy as they formerly have in bright and glowing colors. Perhaps a medium between the two would present a fair state of the business at the present time. The want of sufficient rain last winter to bring out the bee feed, and the extreme cold and backward spring, of the whole of Southern California, tells the whole story why so little has been done in the bee business; or rather, why so much has been done to so little purpose. Forming an opinion now from the best information I can command, I would say at the present time, there is not more than one-half the bees in Los Angeles, San Diego and San Bernardino counties that there was last March; and judging the future by the past, I would say that not more than three-fourths of these will get through to see next March. So that while Eastern bee men have no fears of California honey being crowded on their market this year, they need have but little for the year to come. While this is the dark side of the picture for California bee men, the bright side is the same with the bee business as with most all other kinds of business. The exceedingly rapid increase of bees in this country, and the wonderful growth of the farmers' and fruit-growers' products is the bright side, and enables California to recover from the effects of a drouth in a short space of time. The difference between a drouth in California and a drouth in a cold climate is this, the one comes out of a drouth and goes into a cold, cheerless winter, and the other comes out to go, as it were, into a growing summer.

There seems to be a wide difference in the opinions of bee men, as to the existence of honey dew. It is my opinion that there is something that settles or collects on the trees, at night, which the bees are fond of, and go for it as soon as it is light enough for them to see; and, as soon as the sun has shone on it a short time, they quit their work. With us, it is mostly on the sycamore they work. I would like to ask some of your experienced bee men if bees will work on flowers that will make poisoned honey, or that will poison themselves.

Two men here have lost nearly all their bees, some 200 colonies, and we can come to no other conclusion than that they are poisoned with their own honey. In June, the bees were moved with ours from the mountains to the valley, near the coast.—About August 1st., we moved ours back; the 200 colonies remained, and after a few days they seemed to be doing well and storing honey, but 2 weeks later they commenced dwindling away, and none but young bees could be found about the hives. A part of them were moved back to the mountains before this was noticed very much; but the effect on them was just the same as those that were left. They had plenty of honey and their queen and brood coming out; and still they would dwindle all away and leave a hive full of honey.—Ours that were brought away 2 or 3 weeks sooner did well, and showed no such signs, whatever.

If any other bee men have had like experience, and can account for it and will do so through the AMERICAN BEE JOURNAL, they will render a favor to bee men in this section.

For the past month we have been feeding our bees on grapes. We crush them, and feed 100 lbs. to 150 colonies. It makes plenty of business for them, and they don't think of robbing. The strong colonies, of course, store more than the weak ones, but it is easily transferred from the full hives to the empty ones. The grapes cost but 25c. per 100 lbs., besides the picking. This, we think, is much cheaper than sugar or honey to feed, and no trouble with their robbing.

Some of your correspondents question the statement that hens will catch live bees.—Some of our hens made such a business of it that we had to move the troughs that we kept water in for our bees where the hens could not get to them. The skunks are very fond of bees. We have watched them, by moonlight, scratch on the hive until the bees came out, and then rake them off with one paw into their mouths. The little swifts, too, that are so plenty in California, are fond of bees. We have seen them catch them as they came out of the fly hole. We shot one while he was in the very act, cut him open and found a dozen bees. The bluejays have been taking so many of our bees that we have had to shoot them to get rid of them.

M. S. BAKER.

For the American Bee Journal.

My Hive and Plan of Keeping Record.

I have been using movable frame hives for the past 16 years, and have read all the bee papers and books. We all differ somewhat in opinion about managing the bee.—Perhaps a little of my experience might help some beginner. I always winter on summer stands, as I have had no other place, and for that reason I use a very large hive. I first used a Metcalf hive, size 12x12 inches, and 17 inches high, 8 frames, with honey board and top boxes, movable front, frames stand on the bottom; hives made single, double and quadruple. I used this size for 10 years, and then made up my mind that it was too small, I lost too many bees during the winter. I then made the hive that I use now, my No. 2, and I have another, No. 3, that I designed to winter in the bee house or cellar.

DESCRIPTION OF NO. 2 FOR OUT DOOR WINTERING.

Bottom, 28x28 inches, a partition nailed across the centre, 28 in. long by 21 in. high; sides 28 in. wide and 22 in. high, nailed to the bottom board, with movable ends, making 2 divisions of the hive 28 in. long by 13½ and 21 in. high, inside measure. A 3 in. strip nailed across each end, for a tie, to keep the 2 outsides and the partition the proper distance apart. In this hive I have room for a tier of side boxes, 6 in. wide at both ends, and room for 10 frames. I use a honey board on top, 15x15 in., and 2 other boards, one each side of the honey board, 4½ in. wide; they lay over the side boxes.

I use a top chamber, 7 in. at the eaves, and 10 in. at the ridge; hinged at the ridge for convenience to work the hive. The chamber rests on cleats, running around the hive, $\frac{1}{2}$ in. below the top. In this hive I keep 2 colonies of bees; when I work with one, I turn $\frac{1}{2}$ of the chamber over on to the other half, which saves lifting it off the hive. When I use this hive for extracted honey, I put in a movable division board, and use from 12 to 15 frames or more, as I choose, or can have a perfect colony with only 2 frames. I wintered 2 colonies this winter with only 2 frames each, and they came through the winter all right.

WINTERING.

My manner of wintering is to put the frames in the centre, and division boards on each side of the bees, and then fill the balance of the hive with chaff or fine straw. I usually have 6 in. of chaff at each end of the hive, 7 in. of straw overhead, in the chamber. On the back side of each, that is, on the other side of the partition, there is another colony of bees, to help keep warm. So there is only one side of each colony that comes to the weather single; and that side can very easily be made double. Here we have a big colony of bees surrounded with something to keep them comfortable; and it is the best arrangement I ever saw for out-door wintering. Some other hives may do better in the cellar, but I always winter out of doors.

KEEPING RECORD OF AN APIARY.

When we have 1 or 2 colonies it is an easy matter to remember all that is necessary, or if we forget just what condition they are in, it is no great job to look over just a few hives, but when we have 100 or more to work with, requiring the work of several hands in the busy season, then it is quite another thing. Then it is very necessary to keep some kind of record, especially if we practice artificial division. I have tried several plans of keeping record, papers kept in the top of the hives, little boards, slates, &c. I get my fingers daubed with honey, have to keep a dish of water handy to wash, so it is either honey or water on my hands nearly all the time.—That makes it bad to use paper or slate either, so I take a nice piece of pine lumber, 1 in. thick, 2 ft. long, and from 12 to 18 inches wide; plane it smooth on both sides, and then rule 4 or 5 columns on the left hand side, from top to bottom; in the first column write the month; in the second, the day of the month; in the third, the number of hives; and as I use hives to hold 2 or 4 colonies, I use the fourth column to write the number of the division of the hive. Then rule across the board, just wide enough to write with a pencil handy; rule both sides of the board alike and use it until it is full. Then copy off in a book if you wish to save anything there is on it; then plane the board and rule again. Two or three such boards will last all the season for 20 colonies of bees, without copying off. I have drawn off a sample, which I send, of last year's work. Have taken 2 new, and 3 old colonies and given the work of the season. I always have my second board

at home nights, and criticise the work done by others when I am not along, so I know how it is done.

APIARY NORTH OF HOUSE.

Month.	Day of Month	No. of Colony	No. Division.	Extracted.	REMARKS.
June...	6	1	1	.....	Took 3 brood combs.
"	11	1	2	.....	Took 3 brood combs.
"	12	11	1	.....	New, 7 B. and 1 honey C.; gave this a hatched Q. brought from home.
"	9	2	.....	.....	Did not find Q.; took 3 C., put into 9-2.
"	21	11	1	X 4 C.	New; 6 C.; put in 3 empty frames.
"	9	2	X	.....	Q. gone; cut cells.
"	1	1	X all.	.....	Old Q. is here, taken from 11-1, June 12; the 3 empty frames are full; took 3 B. C.
"	1	2	X all.	.....	Took 3 B. C.; saw Queen.
"	21	2	2	X	This had swarmed and gone back, and were hanging under the hive with their Q.; took 5 B. C.; put the Q. and part of bees inside the hive.
"	21	2	2	X	Strong; Q. laying; clipped her wing.
July....	3	11	1	X	Q. hatched; no eggs yet.
"	9	2	X	.....	Took 3 B. C.; saw Q.
"	5	2	X	.....	Strong; took 3 B. C.
"	1	1	X	.....	Q. gone; lost by swarming out; Q. failed to get back with the bees; cut cells.
"	16	11	1	X	Took 4 quarts of bees; saw Q.
"	9	2	X	.....	Clipped Q.
"	1	1	X	.....	Saw old Q.
"	1	2	X	.....	Did not see old Q.; think she is all right.
"	1	2	X	.....	Took 2 C. and 4 quarts of bees.
"	2	2	X	.....	Q. all right.
August.	9	9	2	X 2 C.	Brood all right.
"	11	1	X 2 C.	.....	Brood all right.
"	2	2	X 2 C.	.....	Brood all right.
"	1	1	X 2 C.	.....	Brood all right.
"	1	2	X 2 C.	.....	Brood all right.

All extracted twice more; 2 outside combs; buck-wheat honey.

Q. stands for queen; B. for brood; C. for comb.

Grant Co., Wis.

E. FRANCE.

For the American Bee Journal.

How to Prevent Swarming.

With many bee-keepers, a most important question is, "How shall I prevent my bees from swarming?" All who have any experience in the matter know how annoying and unprofitable it is to have bees take the swarming fever when we want them to store surplus honey. Can swarming be prevented? I think it can. I am satisfied that bees will not swarm if their hive is comfortable, and they have plenty of room to store honey.

Two years ago I had a swarm issue from a populous and prosperous hive, and the queen being clipped, they returned. I immediately gave the hive a thorough ventilation, and though I did not destroy any queen cells, there was no further attempt to swarm. A few days ago I opened the hive, and found the same queen that came out 2 years ago. The colony is now, and has been ever since, one of my best; and during the 2 years, nearly, since the time above referred to, there has been no sign of swarming. Ventilation, to be effective, must not only be at the bottom but at the



top of the hive. One would be likely to suppose that with openings in the top of the hive, the entrance being in the bottom, the heated air would escape at the top, its place being supplied by the ingress of cooler air at the bottom. But such is not the case. The bees at the entrance of the hive are busy fanning with their wings, their heads being toward the hive. This produces a somewhat strong current of air outward; and if there are openings in the top of the hive the cool air enters at the top, while the heated air escapes from the bottom. To secure thorough ventilation, there should be a honey-board with a little space (about $\frac{1}{4}$ of an inch) between it and the tops of the frames. In the honey-board there should be openings covered with wire-cloth. If the wire-cloth be tacked immediately on the board, the bees will close the meshes with propolis; but, if it be an inch above it and several inches in area, they will not attempt to wax it up. I, at first, used blocks of board, each having an inch hole in it, one side closed with wire cloth; but I found that the bees would invariably close it up. But I have found that if a frame be made, say 8 in. long and 2 in. wide, and the wire cloth be tacked on that, and laid over the holes in the board, so that there is an inch space between the wire-cloth and the board, no attempt is made to close it.

To succeed with this plan, the surplus honey chamber must be protected by an outside cap having openings for ventilation. Ventilate your bees thoroughly in hot weather, and keep the honey out of their way, and you will not be troubled with swarming.

M. MAHIN.

Logansport, Ind., May 14, 1878.

For the American Bee Journal.

Items, Statistics, Questions, &c.

DEAR EDITOR:—I have no interest in speaking kindly of the JOURNAL, except to give "honor to whom honor is due;" but I will say that the JOURNAL deserves the undivided support of every bee-keeper in the land. Truly, it is the *bee-keepers' friend*. There is no paper I feel more freedom and pleasure in writing to.

Our Semi-annual Bee-keepers' Convention came off, as announced in the JOURNAL, on Tuesday, the 7th inst., and was a grand success, both in point of numbers and the interest developed. I will send you full report, but it is so long you will not receive it in time for the June number.

The locust bloom is a failure, but still the prospects are good, and I believe at the close of the season we will have much to be thankful for.

I am trying to gather all the statistics I can in regard to the honey crop of Kentucky, and hope that every bee-keeper who reads this will furnish me with all the information within reach:

1. Number of colonies last season, with increase of same.
2. The kind of hive used.
3. The number of pounds of wax and honey produced last year.

This information is designed for the ben-

efit of our State at large, and will be published by request of our State Agricultural Commissioner, W. J. Davie, A. M., in his annual report, which will be published in September next.

Will you or some of our bee friends kindly answer the following questions:

1. Where and when was the honey extractor invented, and by whom?
2. Who first imported Italian Queens and bees into this country?
3. When and by whom was the bellows smoker invented? As from early childhood I can remember bellows, on precisely the same principle, being used to kindle fires with.
4. What is the probable number of bee-keepers in the United States, and the average amount of honey produced by each, last year, or the total amount produced?

W. WILLIAMSON, *Sec'y Cent. Ky. B. K. A.*
Lexington, Ky., May 11, 1878.

[1. The Mel-Extractor was invented by Her Von Hruschka, in Germany, about ten years since. Noticing that a piece of comb, attached to a string in the hands of his boy, being twirled, was emptied of its honey, he invented the Extractor, which is similar in principle to the Extractor of today. His machine consisted of a wooden tub, with a vertical axle, revolving in a socket fastened to the bottom of the tub, and held, but allowed to project above the top. The comb basket was attached to the axle, surrounded by wire-cloth, the comb resting against it. A string was wound around the axle, and then being rapidly unwound, the honey was extracted.]

2. In 1859 the first Italian bees were imported into America by Wagner & Colvin, from the apiary of Dzierzon, in Germany.—In 1860 S. P. Parsons brought the first colonies *direct* from Italy.

3. A bellows is an *old* invention, but such as arranged to blow smoke to quiet bees, though previously used in Europe, was first brought to the attention of apiarists by the late M. Quinby.

4. We have not the statistics to answer this question now, but hope to soon.—Ed.

For the American Bee Journal.

Honey Dew.

In February No. of the AMERICAN BEE JOURNAL I found an article on Honey Dew, by W. K. Marshall, of Texas, which I expected to be answered by some correspondent in the March No.

The article is so entirely based upon erroneous conclusions and propositions that it ought to be corrected, as many readers might be miscarried by apparent facts.

It has been proved over and over again, by men of science, of all countries of the New and Old World, that the so-called

honey dew is no more nor less than the secretion of the very numerous family of the aphidæ or plant lice.

It has also been often observed in Europe, that honey dew dropped from trees in such quantities that it moistened the ground.—The leaves fairly dripped. More than 50 years ago, Mr. Ehrenfels, who then had over 1000 colonies, reported that in his pine forests, the honey produced or secreted by the coccus or pine bark louse often dropped from the trees in such quantities that his wood-choppers were wont to sweeten their dinner bread with it.

Mr. Marshall bases his argument mainly on 3 points, viz :

1. "It is never found on all kinds of trees and plants at the same time.
2. "It is never found on dead leaves or anything dry, except as it has fallen, or been blown from some green vegetation.
3. "It is always found when vegetation is in a healthy and growing state."

1. Of course, it cannot be found on all trees and plants at the same time. The aphidæ family is probably as numerous as that of the spiders, the flies or the bugs, who all have their seasons of breeding regulated according to the time of the fullest growth of the particular tree or plant they live on. Do the bugs appear before the sap has entered the trees or bushes? Do we see butterflies before flowers boom?

The same with all the aphidæ. When their tree or plant is in its richest state of sap, they have the condition to multiply, and they do it. When the flow of sap stops, honey dew stops also. When the second sap appears, our lice are there again. The more sap, the more lice; the less sap, the less lice. When honey is lacking, do not our bees quickly quit breeding? Do they not almost barbarously, like the old Greeks, expose their children to ravenous animals, or to the inclemency of the weather or starvation? The louse honey, as it might properly be called, only appear in abundance when aphidæ are abounding. If Mr. Marshall, at the next appearance of honey dew, will more closely investigate, he will either find little, creeping, green lice on the young stems or under side of the leaves, or one of the other species of the shell-bark louse on any part of the trees or plants, *except on the upper side of the leaves*. In investigating, be careful not to overlook the youngest shell-bark lice, as they cannot be seen by the naked eye. The youngest are about the best suckers.

2. Is rather a wholesale assertion, not at all borne out by the facts. I have lying before me a piece of white paper, bespotted with divers small honey dew drops by some shell-bark lice, which live on a lemon tree, that was raised from a seed, and which stands near me. This little tree is now in its 4th year, and always has some shell-bark lice on it, in spite of the closest search, and the most thorough washing with lye, tobacco juice, &c. After a while, they always appear again, so that, if science generally did not condemn the idea of spontaneous creation, this might make me believe in it.

These shell-bark lice, we (my wife, my daughter and myself) are wont, these 3 years, to discover by the honey dew on the

upper part of the leaves of the lemon tree, which never leaves the room, except for a wash. For the purpose of writing this article to-day, last night I looked at my lemon tree, and saw again divers spots of honey dew. Over one of the spots I fastened a piece of letter paper, which to-day has several distinct spots of honey dew on it. Mr. Marshall will, I trust, not object to paper, as it has answered better than a dry leaf; as paper taken from a ream could not have old or new honey dew on it before I laid it under the louse. Two young shell-bark lice on an upper leaf, about 2 inches away, in an oblique direction, are the producers of the spots on the paper. If you wish to find the lice for a certain honey dew, never look straight over it, but in an oblique upper direction. They always eject obliquely, never straight; and indeed, so sharp that I have often felt the force on my face, which could not have been if that miniature drop merely had fallen. If you wish to get a proof, spread a few good-sized sheets of paper, over night, under any tree that has honey dew on it. Next morning you will find plenty of dull and shining spots on the paper. Paper will, more or less, soak in honey dew, while green, living leaves will not.

3. This only proves what I have said under 1. I have no doubt, that Marshall has found honey dew where no insect could be found with a microscope. I have found honey dew on plants fully 10 feet from the tree, on which the producers lived. The force of ejection, the smallness of the drops and the current of air may bring it yet farther away. But mark: You never find honey dew under a leaf, while you never find, except as a rare case, shell-bark lice or any aphidæ on top of a leaf. If the lice are feeding on honey dew, why do they not go on the upper side of the leaves, or do they, from the under side, penetrate the leaves in order to suck the honey on the upper side?

Leaves are not destined to exude any fluid. They are organized for the inhalation and exhalation of vaporous gasses only. In order to exude any fluid, their cells would have to burst first, which has certainly never been seen yet. Puncture a green leaf as much as you please, you will never see fluid exude. It is a different thing to intercept the flow of sap in a maple tree trunk, or cut a vine or wound a peach tree.

If in 1862 you had such a mild winter that your pine trees grew, the coccus, or pine tree shell-bark louse could also grow. Depend on that. I wish we had pine trees around here. My bees would often get a good meal from them in early spring.

I do not look upon honey dew as an excrement any more than on honey as an excrement, which it certainly is not.

The aphidæ, which live on grape vine, I have often observed with a good magnifying glass, when the ants would come, tickle them with their antennæ, and my innocent lice would turn up high their abdomen, on the upper end of which are 2 minute, hollow pipes, out of which presently spring 2, very small drops of a crystal fluid, which my ants would greedily lick up. Among



100 aphidæ I would find working, generally, from 2 to 4 ants. It is assumed by many scientists that aphidæ suck the juice, assimilate from it what they need and eject the balance, in about the same way as our beloved bees do; for bees change the saccharine matter they bring home, to a great extent, before emptying into the cell, which has also been proved by better men than I claim to be.

Mr. Marshall, I trust, will not feel offended, but false theories should be contradicted or disproved whenever seen. If more light is wanted, my lantern is always burning.

CHAS. SONNE.

Sigel, Ill., March 10, 1878.

For the American Bee Journal.

Patents—Answer to D. D. Palmer.

No; we, too, don't like patents. They cost money, Mr. Palmer. But Mr. Langstroth has lived to see his original arrangement become the standard bee hive—the best and most popular hive in use. While he is not reported rich from his patent, several not over-scrupulous parties have made small fortunes by selling his invention. The fittest survive, and Mr. Langstroth has the *honor of survival*; yet, several of those same parties who copied his invention, changing only the form, and calling it an improvement, after his patent expired, became suddenly convinced that for all kinds of purposes, the regular standard Langstroth frame is best. Some of these parties—*survive also!*

Every honorable bee-keeper knows and gives Mr. Langstroth the credit of all that he claimed in his hive.

The honey extractor has been extensively sold, and is a valid and real invention.—The inventor did not take out letters patent, and as a result, not one-half of the bee-keepers using the extractor *even* know the name or nationality of the inventor. And, strange to say, he has not got rich from the *generosity* of those who do *not* like patents. Yet, like Mr. Langstroth, *he survives!*

Mr. Quinby made, advertised and sold a bellows smoker. As to its originality, I am unacquainted. Either because he did not get it *patented*, or that it was not coveted, or that certain unscrupulous parties who lived in his day and generation feared his influence, it remains to this day the *private* property of the lamented Quinby estate.

Bingham, in the spring of 1874, showed at the Michigan Bee-keepers' Association a direct-draft smoker, which he afterward added to and subtracted from, and otherwise changed until the public were informed, at the Michigan Bee-keepers' Association of Dec. 1876, that on the 1st of March, 1877, the said Bingham's bellows smoker would be offered for sale. The smoker was shown so covered up in its main features that no one knew anything about it, except that it burnt sound, dry stove-wood, and would not go out on any reasonable neglect. Orders were taken in the convention from all but 1 or 2 of the members present. These orders were filled according to agreement in March, 1877, at which time a smoker was sent to the

AMERICAN BEE JOURNAL, which gave the following notice and criticism:

BINGHAM SMOKER.—"Friend Bingham has sent one to this office. It is similar in shape to the Quinby, but of larger tube, and heavier bellows. It burns any hard, dry wood, and keeps it ignited. After laying it down five minutes, it has sufficient fire to start again. It is supplied with full instructions for use, and will be kept for sale at this office."

One was also sent to *Gleanings*, and a month later the following notice and criticism appeared:

"Mr. Bingham has very kindly sent us one of his smokers, which works just about as well as Quinby's, but so far as we see, no better. It is by no means as neat as the Quinby, and is much more cheaply got up. With our tools and machinery, it would be an easy matter for us to make them by the quantity for 50c. each. Why can they not be sold for an even dollar? I confess I hardly know where duty lies in such matters."

As I had never had much knowledge of the *Magazine* I did not send a smoker to Mr. King, who says in a private letter that if I had so done, he would have given it a good notice, as it was far, very far better than the Quinby.

As to the cost of making smokers I knew very little at that time, but as I was compelled to make them largely, I soon found that the price adopted as fair and honorable by Mr. Quinby, without a patent, would be ample for me with one, should I be compelled to get one to secure to myself the credit, and to my family the benefit of the invention. Accordingly his prices were adopted. As Prof. Cook's article, to which you refer, refers to the smoker question in part, I would ask with all due respect, Was the price of the Quinby smoker, which was so generously given and donated by Mr. Quinby to the cause he loved, so reasonable as to be an honor and a protection to him? If such was the case it was the *precaution* which I took, probably, which so turned the minds of those who so kindly advertised my humble invention, without my *consent or credit*; and is, therefore, a *large card in favor of procuring patents*, as a means of *introducing valuable improvements to actual consumers*, while it does *not* stimulate patents the *originals* of which are not coveted. T. F. BINGHAM.

Abronia, Mich., May 7, 1878.

For the American Bee Journal.

Furze, as Forage.

Mr. T. G. McGaw, in the April number, gives Mr. Eldridge's description of furze, but really does not do the plant justice, in an economical point of view, as to its value in agriculture. In the *Chemistry of Food* in relation to the Breeding and Feeding of Live Stock by Charles A. Cameron, Ph. D., M. D., &c. &c. 1868, he writes as follows:—

"This plant, instead of being unprofitable, deserves to rank amongst the most valuable vegetable cultivated for the use of domestic animals. It grows and flourishes under conditions that materially affect almost every other fodder or green crop.—It is rather improved by a cold temperature; it thrives best when supplied with abundant rain, but can survive a long drought."

The produce of an acre of furze is equal to an acre of meadow. For further information and analysis, the above mentioned work must be referred to.

I have seen, in Wales, several small water-wheels driving 3 rollers, in which are fastened strong teeth, for the purpose of crushing furze.

J. S. Wood.
Nyborg, Denmark, April 17, 1878.

For the American Bee Journal.

Interesting Topics.

A long time since I tried to help (or hinder) by a few lines the old JOURNAL.—A long and serious illness has caused a neglect, both of my bees and the good old JOURNAL. Its superiority over all other journals devoted to the same object is so visible that it commands respect from all.

ITALIANS vs. BLACKS.

The superiority of the Italians is so visible that it does seem it would long have been settled. I have had them side by side for 7 years, pure Italians, pure blacks and hybrids. There are three points in which to compare them. First, the Italian hives contain double the number of bees, and often *three times* as many. They travel farther for forage and are *never* troubled by moths. Last, but not least, in a poor season they will average 10 lbs. to 1 for the blacks, of surplus honey. Now, I don't need to compare them in any other respect, yet the Italian has claims of being superior in other respects. Colonies all in like condition at beginning of harvest—same hive, same locality, and tried in 5 different locations, side by side.

IMPORTING QUEENS.

Imported some Italian, Cyprian and Smyrniat, September 1, 1875, but they starved while in the express office at New Orleans. One Cyprian lived 24 hours after I received them. I regretted greatly the neglect of the company. The Italians were all dead and moldy; the Smyrniats were dead, but the combs clean; the Cyprian were nice and clean, and many of them able to move. We have ships plying between here and Java, so I can get bees from that Island, as there are native Javanese who come here. I can get Cyprian bees in the same way. I am *determined* to have them direct from their native place. I care not for second-handed races. They send hybrids to America, and then to be mixed by American bees again, and then sold at a fancy price, and then only one-fourth blood. None for me. There is one thing I never *could* believe, in the Dzierzon theory, viz: That pure queens mated with black drones will produce pure drones. I was always in doubt until I gave it 3 good trials and learned to my sorrow that my fears were well grounded. I am now arrayed against that theory and argue it at proper times from actual experiments during 3 seasons. I have fully satisfied myself. Let others do the same. I believe it impossible to keep an apiary entirely pure for a length of time, unless one is continually adding young queens that are tested or fertilized in con-

finement. After long and mature consideration I have decided to re-queen my apiary every year, if the honey season be good and breeding extensive; if not so, then every 2 years. In the South, a queen will not remain prolific as long as in the North, as breeding is carried on so much longer.—Two years would not be much too long for a good queen, but in a fine honey season when a queen keeps up 15 full section frames of brood from April 1st until August 1st, it uses up a queen.

FLOATING APIARIES.

I investigated this matter 3 years ago and found that to build a boat for the express purpose of carrying bees was not practicable, and gave the subject of forage along the Mississippi River, from Cairo to Natchez, a careful investigation, and found it would not support an apiary or a barge, but by going up small streams it might do, but have doubts. There is a similar object I have in view, as soon as forage begins to fail here, to move the bees up above St. Louis by railroad, so as to lose little time in transit; but if forage should remain good here, it would not be advisable, only in case honey fails here in the last of May—then go. In this State there is forage for 1000 lbs. to the colony if the atmosphere was only favorable, which is generally too cool. Many speak of the hot South; my objection is, it is *not hot enough*. I shall watch the season closely, and if our harvest is not good I will go to Illinois at once.

FERTILIZING IN CONFINEMENT.

Well may Dr. Parmlly offer \$25 for the "best method of fertilizing in confinement;" but hereafter, when I offer anything for a prize, I shall consider well who are to be the contestants and manner of decision. Yes, 'tis a fine plan to get the best mode on certain topics, for two or three to offer a small prize, thereby bringing out a few of the best, and then it is public. I deem it more honorable to communicate such things at once to the journals, when such a small sum as \$25 is offered. I would give it free to the JOURNAL before I would compete for a sum less than \$100.

I do not deem any plan to propagate a foreign race of bees in any way successful, unless done in confinement, to retain the race pure, to prevent loss from birds and other enemies, to prevent loss from perishing while on a bridal trip and from entering wrong hive. Queen breeding is very uncertain at best, and when attended with all these drawbacks it is very much of a risk. Now, to think of raising pure queens when there is any black blood within 10 miles—it is very uncertain to my mind. In Point Coupee, I knew two instances where there was not an Italian within 10 miles, and yet, there came a swarm with a fine Italian queen, mated with a black drone. I am familiar with several instances where Italians have come 5 miles and united with blacks; and is it not as reasonable to assume that blacks will do the same? The fertilization of queens must be done in confinement, if it is expected to keep the race pure. I tried it in 1872-3, and failed almost entirely. I tried again with much



better success. I noticed last year the fertilization of 3 queens; in each instance they came out, rose about 15 feet high and then seemed to sail around in a circle until they met the drone, which I saw in each case; at the moment they met the drone I lost sight of the first two. I saw her all the time she was out; she met the drone as the others did, at the instant of meeting they fell within 4 feet of the ground, when they separated, the queen entering the hive, showing that copulation had taken place. With these observations I believe I know the requisite space for fertilization. I met a bee-keeper of many years experience who stated that he had observed the fertilization of more than 40 queens, and stated that it was in each instance as above stated. The expense in the North for a house would be heavy, but in this climate but light. If health permits, I intend to give it a thorough trial; as learning just the time a queen will meet the drone is an uncertain thing. One could sit and watch a nuclei for the young queen to appear, and as soon as she comes out put her and a drone in a cage and see what you will get. That I have tried and failed entirely more than once.

Another one asks for some plan to raise queens with less bees. Enough has been tried to show that in nuclei is not the proper place to start queens, and until the cells is 10 days old, it has not a safe place in the nuclei. So much raising queens in weak colonies has already been done, raised cells in very strong colonies, and when 10 or 12 days old put them into nuclei and in the confinement. I hope Dr. Parmly will succeed in creating an interest and get out all the wisdom possible, for when we get this Cyprian, Javan, and Smyrnan, how are we to keep them pure unless we succeed with the confinement? Will Dr. Parmly please give us a brief name for this process?

CONVENTIONS.

It seems that the National Convention has wandered far East. It is a good road to travel, and even to look in that direction and see one "with his hat on" is still better, but in the matter of bee conventions you have gone too far to do us any more service in the way of holding up the interests of the South-west. I will make a suggestion for the consideration of the South and West: Let us have a convention in St. Louis next autumn. Let us have opinions *pro* and *con* through the AMERICAN BEE JOURNAL.

BOX vs. EXTRACTED HONEY.

We are glad of the interest taken through the North in favor of box honey; it gives better opportunities for our extracted here, as it does not seem practicable to raise box honey. In giving accounts of those large yields of box honey, there seems something always left out; and when those who raise large crops of box honey, and give their mode of the same, there is always something not brought out—one important item left out—not mentioned, perhaps it is best.

WINTERING.

Wintering seems to be still a vexing question. Well, I am done on that topic.—

If I was in the North I would send my bees South; not south just to middle Tennessee, but to New Orleans. The 1st of September my bees were weak, and had but about 13 lbs. of honey; November 10, I prepared them for winter. The blacks had but little honey, Italians an abundance. I equalized and gave, as near as I could, 20 lbs. to each one. During my absence, 2 deserted their hives, (perhaps were robbed). I have been examining this week, and find an average of 5 full frames of brood, gathering fully from willow and fruit bloom. Hives contain about 8 lbs. of new honey, (willow), and some old. I hope we may have a good season this year, as our last was one of the poorest ever known. W. B. RUSH.

Carrollton, La.

For the American Bee Journal.

Foul Brood, &c.

In reading the proceedings of a Bee Convention not long since, I noticed that Prof. Cook make the remark that he did not think the extractor was the cause of foul brood. He is perfectly correct in making this statement. My object in writing this article is to let all know that the modern management of bees cannot be the cause of foul brood. My bees have had the foul brood for the last 3 years, and I have never used the extractor. I have never seen but one in the State. I have never fed my bees anything; have never seen foundation.

When the receipt for foul brood came to hand, I commenced doctoring, and every colony I so operated upon has since died. Salicylic acid and borax will stop it for the time being, but the next brood is affected; and why should it not be, if the disease is in the honey in the hive, as the late Mr. Quinby said it was? I have lost during the last 3 years about 40 colonies of bees, but I hope that it is the last I shall lose from foul brood. I cannot now discover any signs of it in the colonies I have left. I have sent for an extractor, and if I find any more colonies affected, I think I'll take out every frame and extract all the honey.

The bees in my box hives commenced to die first. I have been using the new Quinby hive for the last 3 years, and I have not had a natural swarm from it, yet I keep the hives shaded, and give them plenty of box room, and occasionally put an empty frame in the middle of the brood nest. In the swarming season I do not keep more than 6 brood frames in the hives during the honey season.

The most honey I ever got from one colony was last season, 173 lbs., in boxes and sections; they were black bees. Two years ago this spring, I sent \$5 East to pay for an Italian queen, and in the course of time she arrived by express dead; the same parties, in order to make the loss good, sent me two more queens through the mails; they were also dead when they arrived. The same day that the first queen came, I sent \$5 to Lower California, to pay for an Italian queen, and in 19 days I received by express a beautiful looking queen, and the first one I ever saw; she was put up properly.—Well, things went on smoothly until the

Italians got the majority in the hive, and when I would open the hive, they would make a bee-line for me, (they are so smart), and sting my nose and close my eyes.

It is generally considered, here in Oregon, that it is unprofitable to engage exclusively in the bee business; but, I think, if it was not for foul brood, it would be profitable.—I know of not more than 5 or 6 bee-keepers here. I sell my honey at 25c. per lb.

I have sent for the Prize Sections and Crate, as advertised in the AMERICAN BEE JOURNAL. I sent for the 2 lb. glass jars last spring. I like this box the best of any I have ever seen. I have sent for Novice's 1 lb. and 2 lb. sections and tin separators, and if they come in good condition I consider myself pretty well fixed.

The wild willow bloomed here about January 15. It rained hard until about the 20th of February. The beautiful dandelion is commencing to bloom.

If I should make a guess at what the cause of foul brood was, I would say, "in and in breeding." THOS. BRASEL

Portland Oregon, Feb. 21, 1878.

For the American Bee Journal.

Wintering.

Perhaps a few words on the above subject might be of some use to such bee-keepers as, like myself, are not blessed with the best kind of a winter repository. As for outdoor wintering, I have not much to say, as I have had but little experience and less success with it. If they were to stand out exposed, I could not expect them to winter in this climate with any degree of success; and if packed with straw and half buried, as is recommended by some, it would soon cost more to do that than it would to make a good cellar, and put them in and out of that once a year. Three years ago I put 5 colonies in a little place dug out under the house, and lost none in wintering, but lost 1 in the spring by them killing their queen. All were movable-comb hives except one, and that was a common box hive. I ventilated the box hive by blocking it up a very little and leaving a small hole in the top.—The frame hives were ventilated by leaving the entrance open about $\frac{1}{2}$ inches, the caps left off and the cloths loosened up, but spread all over the top of the frames. I could not tell much about the temperature, as I had no thermometer then, but I know it was very irregular. In the coldest weather I kept a cup of water near the bees, and frequently found it frozen, but never saw any bad effects from the cold, except that 1 colony got the dysentery. I hardly think it was caused by the cold. That colony I frequently took up to let them fly on the window in a warm room, and out doors when the weather was warm enough, but never was benefitted by it. Every time they had a fly they were worse off, though they came through the winter, and by good care in the spring, they made a good colony.

That season I got 225 lbs. of honey for each colony wintered, and increased my stock 200 per cent.

Two years ago I put 12 colonies in the same place, placing them 6 on a side on 2

benches. The temperature that winter varied from 37° to 60°, but most of the time the mercury stood at 48°. Hives were ventilated by leaving the entrance open about $\frac{1}{2}$ inch, same as the winter before; the top I ventilated according to the temperature.—While the temperature was at or near 48° I left the cloth down flat, all over the frames, and when the mercury went down several degrees, I covered them up warmer, by laying several thicknesses of folded newspaper over them. When the temperature began to raise I took the papers off, and when the temperature raised much above 48° I raised up one edge of the cloth. When the mercury went up to 60° on the 31st of December, I found the bees as lively as in summer. I then about half uncovered the hives and left them clustering on top of the frames until the temperature went down far enough, then they went among the combs and I covered them up again, and so I kept changing the ventilation of the hives during the whole winter.

For cover over the frames I use 2 thicknesses of sheeting, doubled together with 2 thicknesses of newspaper between them.—I put them in on the 3rd of November, and took them out the last of March and lost none. All came through in excellent condition. The winter being very wet the ground filled up with water, and from February the water stood even with the bottom of the repository; for some time, and before time to take them out, the water raised about 6 inches, and when I took them out I waded in the water about ankle deep.—That season I increased from 12 to 56 colonies by buying only one queen. It was a very poor season for surplus honey.

Last year I dug out my cellar about 7 feet deep, and plastered it with water lime, but failed to get it water tight. I put the 56 colonies into it on November 24, and took them out the 30th of March, and the 2d of April the water run in so fast that I took out from 4 to 8 pailsful every day for about two-thirds of the time; and once every two days, the remainder of the time. I made it one of my regular chores.

I ventilated the hives by leaving the entrance open about 4 inches wide and a $\frac{1}{4}$ inch bit hole, half way up the front board, and left the top about $\frac{1}{4}$ uncovered, without a change during the winter. They were tiered up 3 benches high, the lower one being about 20 inches from the bottom of the cellar.

I had a sheet-iron stove in the cellar, and a 5 inch pipe connected with the stove-pipe above the floor. Occasionally during the winter I put in a shaving fire that would heat the stove red hot at once and soon go out. The object of that was to dry the air in the cellar, though I am quite sure I did not do it often enough to do much good.—To ventilate the cellar, I left the draft hole of the stove open, and perhaps two-thirds of the time I left the cellar door open, at night, in the stove room.

The regular temperature during the winter was 48° seldom varying more than 1 or 2 degrees. Out of the 56 colonies which came out alive, and after I sold 1, had 1 robbed, and united a few weak and queenless ones, I commenced the season with 47 colonies.—



I keep my cellar dark, but go into it with a lamp as often as I have occasion to. My experience has exploded many a fine theory, such as: Never disturb them during the winter. Neither have I ever been benefited by winter flights, and have quit it entirely and set it down as an erroneous theory.

Palo, Mich.

S. K. MARSH.

For the American Bee Journal.

How I Raise White Clover Honey.

As soon as white clover commences to bloom, divide the strongest swarm. I use the Langstroth hive. It should be done before queen cells are started. Take a new hive, painted like the one you wish to divide, and from the old one remove 5 frames, ($\frac{1}{2}$), containing brood of all ages with the adhering bees, into the new one, leaving the queen in the old hive. Put a division board in the new hive, set boxes on the frames, close up $\frac{3}{4}$ the entrance and leave it on the old stand. Remove the old hive 20 or 30 feet away, fill it out with empty frames and the job is done.

In a few hours a large proportion of the old worker bees will return to the old stand, enter the new hive, thus crowding it. They will commence building queen cells in the brood chamber at once, while the surplus bees will be forced up into the boxes, and begin work. By the time a queen is matured the boxes will be filled with nice, white honey. Enough bees will remain in the old hive to keep it prosperous, as it has a laying queen.

W. C. TOWLE.

Eugene, Ind., May 7, 1878.

For the American Bee Journal.

Burch vs. Novice.

MR. EDITOR:—It is not my desire to excite any ill feelings or controversy through the columns of our valuable BEE JOURNAL, yet, the desire to see fair play prompts a few words on my part; and it certainly does seem to me that Mr. Burch should have borne his loss, in the matter of comb foundation, without calling on Novice to make it good. At that time it was but an experiment, and Mr. Burch could surely only have ordered it as such.

A. I. Root has had to bear a great deal of abuse at various times, and perhaps he deserves some of it, though I have had some dealings with him, and the trade was on the square. But Novice must certainly "rise and explain" about that deficiency in the weight of the beeswax.

Some time ago, the columns of our bee publication contained the announcement that a new work on the honey bee had been published, and the title thereof was a taking one, "Money in the Apiary," and it was to tell us all how to double our profits; and, Mr. Editor, as I had never got all the money that I wanted from my apiary, I forthwith enclosed the desired 25c., and sent for it; waiting anxiously, in the meantime, for its arrival. Just imagine my feelings when I received an envelope, (a common buff one), with my bee book inside of it. I must con-

fess I never felt so badly sold before. The size of it being 3x5 inches, and containing, all told, 19 pages of reading matter and a few advertisements; and one of the most important of its teachings is, that we must re-queen all of our colonies the first thing we do in the spring. And where is the successful bee-keeper who does it?"

Cambridge, Ill.

J. V. CALDWELL.

Bee Interests in Los Angeles, Cal.

N. Levering is editing a column called the "Bee-Keepers' Column," in the Los Angeles *Star*, being requested to do so by the Convention lately held in that county, from which we extract the following:

SWARMING

The swarming season is upon us, and from all we can learn bees are casting an unusual number of swarms, but not so large as ordinarily. They seem disposed to retrieve the losses of the past and are spreading out their forces rather thin. One, and perhaps the only reason that can be assigned for this is that colonies generally, were quite weak at the commencement of the working season, which opened upon them quite luxuriously, and inspired their workers at once to action, and her majesty of the hive to active duties to augment her forces to gather the coming bountiful harvest, there being a large surplus of empty comb at her service. We are often asked the question, how to prevent swarming? The only cure that we can prescribe is artificial swarming, or cut out all the queen cells every eight days. Care should be taken to remove every cell, for should there be one left a swarm will certainly follow. Many absconding swarms are passing through the country en route for the mountain of Hepsidam, or a lodge in some vast wilderness. There is no general rule by which the apiarist can tell when they are going to swarm, they often swarm when least expected, and need careful watching from about eight o'clock in the morning till four in the afternoon.

BEE-KEEPERS' MEETING.

Meeting met pursuant to adjournment. President A. J. Davidson in the chair. Minutes of last meeting read and approved. The President stated that he had received a communication from Mr. Wilkins, of Ventura county, stating that there were about 2,200 colonies of bees in that county to begin the season with. Packages for marketing honey was then taken up and discussed. E. W. Sinclair advocated shipping in barrels, ironed hooped and thoroughly waxed on the inside, which he said might be done by bringing the wax to almost a boiling heat and pouring it in at the bung hole, corking up and rolling the barrel quickly, so as to spread the wax in all parts; then turning it out. It would take about one pint to a 30 or 36 gallon barrel. J. E. Pleasants, of Anaheim, stated that the bee-keepers in his part of the county were going to ship in barrels this season. Twenty-six gallon barrels were

mentioned as the proper size for shipping purposes, which was concurred in by the meeting. The subject of canning was then discussed. E. E. Shattuck said he had suffered loss from imperfect cases, that during transit they would, from rough handling, require re-nailing, and nails were often driven into the cans, causing leakage. N. Levering said the cases should be strapped with iron. J. E. Pleasants recommended raw-hide. A. J. Davidson said, in soldering cans he made a small orifice with an awl or some pointed instrument which was soldered after soldering the main entrance.

On motion of N. Levering, a committee was appointed to ascertain the respective cost of packages (cans and barrels), and report at the next meeting. The President appointed the following committee: J. E. Pleasants, N. Levering, E. E. Shattuck.

C. J. Fox, President of San Diego Beekeepers' Association, came in and was called upon for a statement relative to the honey interests in his county. He said that the loss of bees in San Diego county the past season was less than one-half; that bees were doing remarkably well, storing honey and swarming unusually; that the beekeepers would make extracted honey, and not comb, as heretofore; and that they had tried, to a limited extent, shipping honey in barrels last season with quite satisfactory results; that where it was shipped by water the barrels should be wood-hooped, as the action of the salt water on the iron hoops would rust them off.

For the American Bee Journal.

Smokers and Sections.

MR. EDITOR:—Once I found fault with the rough frailty of my friend L. C. Root's smoker, also with Novice's 1 lb. sections.—But I got "churned" a little for it. Well, pretty soon, Novice *himself* must have found fault with the sections, for just as I predicted, he went at it and made them a *little* better. Probably as good as he can.—I will send you a sample section, soon, such as I make with a jack knife, or get some way. Now about

SMOKERS.

Somebody has caused friend L. C. Root to improve his *smoker* also. I have just been using one, and I find it much more solid than the old one, but so heavy as to completely tire out my hand. I have been comparing it with one of Bingham's smallest size, and *some way* the little B. smoker has nearly twice the draft, and is so light and easy to handle, and yet so firm and strong. Much has been said about these smokers, so much that I have been testing different ones for the past few weeks; and, candidly, and disinterestedly, I think it is as you said. The L. C. Root smoker is an improvement on the Quinby, just so far as it copies Bingham's; and the copy is so complete and the change so "Binghamized," that, were the shade of the lamented Quinby to visit this mundane sphere, he would say: No, that is not a *Quinby non patented* smoker, it is a Bingham patented,

and a palpable infringement, which I never would have encouraged. The addition of heavy cast iron fastenings adds to its weight, but *not* to its strength. As smokers are liable to fall oftentimes, the lighter they are, the less susceptible to injury.

I think Mr. Bingham is away ahead yet, and may justly claim to be the original inventor of a practical bellows smoker, so completely has he revolutionized it. Mr. Quinby took great pains to make the connection tube between the barrel and the bellows *air-tight*; but, since Bingham discovered and patented the principle that the *open air* was the best "tube" to blow through, I notice that the Quinby not only has a very loose fit between the tube and bellows, but actually has holes to let in some of Bingham's fresh air.

Well, to conclude, I will say that I thank friend Bingham for the light, firm, durable and forcible implement he has given us.—The *FIRST* practicable bellows smoker, as the old heavy German smoker was too cumbersome, while the Quinby was too frail and imperfect in its action to be of much service after the first week's use. Above all else, let us give "honor to whom honor is due."

Bees about here are swarming, robbing and starving, all at the same time. Precocious seasons, and bees are like precocious children; at 8 months, they can walk; at 1 year, talk; at 4 years, declaim; at 10 years, they know more than their parents; at 15, they can run horses, gamble and chew tobacco, drink poor whisky, &c.; and at mature manhood, just about chew gun, with a string tied to it, and then come home to board with "ma." Many of my colonies of bees have gone to boarding with my 2 qt. feeders. Is this to be the *summer* of our discontent? It looks so.

JAMES HEDDON.

Dowagiac, Mich., May 18, 1878.

For the American Bee Journal.

Chips from Sweet Home.

We received from A. I. Root 2 dipping plates, with 5 in. comb foundation machine. Gave them a thorough trial for many days, but the wax would stick more or less, although we thoroughly starched, &c. Two women suggested a board; we tried a small piece. Well, it slipped off nice, so we made 2 plates of pine, planed thin and smooth; and, to say the least, they are "peelers," *i. e.*, the wax sheets slipped off almost too readily. The boards should be made thin and smooth, of straight grain, with handle on top, similar to other plates. To keep from warping, when not in use, hang in a well or cistern, or lay in a barrel of water. I think, by regulating the thickness of the board, the thickness of the sheets can be evened. Two dips with boards will make as thick sheets as 3 with tins, and cool quicker, *i. e.*, we have to hold over boiler less time to quit dripping. One dip with boards is often sufficient thickness.—Some wood may be better than others.—Try, and report.

D. D. PALMER.

Eliza, Mercer Co., Ill.

Conventions.

Apiculture as a Business.

READ BEFORE THE N. Y. CONVENTION.

Apiculture dates back to the earliest history of our race. Marked notice has been taken of the Bee and Honey in all ages, and it has now become prominent as a business. We have learned that the Island of Cyprus has been noted for the purity and value of its honey and wax; and I hope ere long our own favored clime may possess some Cyprian bees. Bee culture was probably introduced into our country by early settlers, but it received its first impetus as a business about 20 years ago.

By reference to the report of the National Convention in New York, the fact will be discovered that there is a growing demand for honey which will be supplied. We do not now begin to furnish honey enough to supply the increasing market; and yet, some are croaking about glutting the market or overstocking the United States with bees. This idea is so absurd as not to need notice.

True, in this as in all kinds of other business, there are losses, but I mention that for the amount invested, and the care and attention required, no other business presents better prospects for a safe investment and steady gain, with fewer losses.

But what advance has apiculture made within the last 50 years? Beginning with box hives or gums, and obtaining honey by murdering the bees with brimstone, we soon began to use top boxes for surplus. Then Huber came with his hives and articles, in which he explains the natural instincts and habits of the bee. Following him, S. B. Parsons, of New York, was, I think, the first to introduce the Italian bees into our country. Soon we find Quinby, Langstroth and King following with the movable, frame hives, and then apiculture began to appear in a more favorable light and receive more attention.

Next comes the extractor, a valuable invention, without which our bee masters would be lost, and with which honey can be placed on the market at a price which will compete with the finer syrups, and, according to medical authority, honey is much the best to use. Combs can also be saved for future use.

Next comes comb foundation, a most useful and indispensable invention. With it we can save at least $\frac{1}{2}$ of the work of the bees, and make use of our old wax, get straight combs and avoid drone comb, where not wanted; and the comb produced by it is more uniform.

Many valuable improvements have been made in bee hives. I am studying the hive question thoroughly, and expect soon to see placed upon the market a hive which shall be more easily and more speedily handled than anything that I have ever yet seen, giving all necessary room for surplus, and being a good hive in which to winter on summer stands. I am of the opinion

that wintering on summer stands will be generally adopted. I am watching the experiment of wintering swarms with two queens in one hive, with a thin division board and entrance from opposite sides of the hives; and I hope to find success.

If you are a mechanic, you can make your own hives, or get them ready to nail, and the profits are sufficient; but remember, in order to succeed you must work in this as well as in any business.

Here, on a pleasant summer day, I love to see the countless thousand of busy workers hurrying to an fro, their golden bodies resplendent in the sun, seemingly striving to please their keeper,—and how sweet is their busy hum? SILAS M. LOCKE.

Marketing Honey.

READ BEFORE THE OHIO CONVENTION.

Mr. President and gentlemen of the Convention: At the last meeting, at Delta, it was thought advisable to have certain matters pertaining to our favorite pursuit, (bee culture), discussed at this present meeting in Napoleon, and to that effect there were persons appointed who should address us on the subjects then named, and amongst them the subject of "Marketing honey" was appointed to the lot of your Vice President.

Within the past year much has been written on this subject. If we have a uniformity of ideas, a regular and systematic size of sections, to put up our honey in, of one, one and a half or two pounds weight, and use some system of information by which the members can all be posted in regard to prices of honey, both comb and extracted, we shall be prepared to act and sell understandingly.

If we conclude to ship honey, provided our home market is not competent to the whole consumption, why not have a member of this Convention appointed to confer with wholesale houses and act as an agent for our society, thus disposing of our honey at best regular rates and gaining a fair price for each and every one? To this end the honey should be graded, and every man's sections labeled with his name and apiary, (if he has given it a name), and his residence.

With many there is a fear that the Market will be overstocked, and that the supply will be in advance of the demand. Such has been the cry at every stage of the growth of the country. Look at the orchard. When I was a young man, some fifty years ago, the farmers said, "Plant no more fruit trees; there are too many now; fruit is worth nothing." From that time to the present, millions of apple and other fruit trees have been planted, and I would ask, is the supply to-day in excess of the demand? We all must answer no; emphatically no!

I went through the city of Toledo and called at the grocery stores to enquire both in relation to the price of apples and honey, as well as to the supply. I found apples scarce—only one kind on the market, and few of them; a third-rate apple in flavor,

the Ben Davis, and these brought from the South and West, and the lowest was \$1.60 per bushel, by the barrel. What say you, apiarists and farmers, can we not afford to plant more apple trees? Is the supply too great? Not at all! It can be largely increased to great advantage! So too, in regard to honey. Is the supply equal to the demand for good, comb honey, in the best marketable shape? or extracted honey put up in attractive form, for retailing, or for wholesale? I will answer no.

On going my rounds, enquiring for apples, I made honey, its quality and supply, my earnest enquiry. What was the result?—Scarcely any—almost none, of a good article in attractive shape! My enquiry was, "Have you any honey to sell?" "A very little." And they showed me a half dozen sections, pasted together, with paper over them; the end one having been taken off, the package, dusty and smoky, had a forbidding look, and instead of being enticing, it was just the reverse. I asked, "How long have you had this?" "Since early last fall. There is little or no demand for comb honey now." I had a section glassed, and showed it to him, and asked, "Can you not sell such honey as this, put up in this attractive form? I can give them to you in a shipping case, so that you can take out just what you wish to sell and keep the balance clean and neat." He was pleased; I saw his eye brighten, and after a little, he said: "Yes, I can sell such honey as that, put up in that way! What would you charge me for 100 lbs.?" I said, "\$25."—He studied awhile, then said, "I would have to sell it at 30c., but there would be no waste and I can put it in a basket with orders left me, and deliver it as neat and clean as it is now. I guess I will try some, any how."

Here was a man who felt sick over honey; there was *no sale* for it; but as soon as he saw something neat and attractive, he was alive to his interest and would purchase!—I asked him, "What did you pay for that section box you have?" He replied, "Fifteen cts. a lb., but every time I took off a card I got my fingers smeared, and it was always more or less smutty, and I could not keep it clean and neat."

We want to know how to increase the demand; how to get up a market for honey.

First, if comb honey, it should be in neat, clean, white section frames, properly filled and capped, and put upon the market in neat shipping crates, holding, say 24 sections or more, so that they look not only attractive and inviting, but even *enticing*! These sections, if put into frames, can be glassed before or after they are filled or not at all, as may be preferred. Either are neat and handsome. I think I would prefer glassing after filled, if I glassed them at all. I think it would be well to offer them for sale both ways, glassed and unglassed, for when put into the shipping crate, one shows through the glass in the crate about as handsome as the other. The only difference will be with the grocer in sending to the purchaser. He cannot pack the unglassed one in his basket and keep it in shape as well as if glassed.

These refer principally to sections put in

broad frames, but can be used for sections, say 5x6 inches, put together closely with a band of paper around them, $1\frac{1}{2}$ to 2 inches wide, which will hold them perfectly secure. These can be placed on top of the broad frames, and when filled can be glassed, the same as those put into frames and placed in the second story of the hive. I think, in either case, tin separators will be advantageous.

In a glassed box you gain much in weight, and the person of taste and means will purchase them in preference to the unglassed, but to create a demand and make a market, you must cut the surplus weight down, so that you can hold out an inducement to the larger class of people; viz, the poorer ones, so as to give them the same amount of honey for less money; and thus, the poor can purchase the same quality, just as neat and clean, and not pay for the glass, which they cannot eat. For shipment, when the shipping case is full, they both remain stationary and reach their destination with uniform safety. These shipping crates have glass sides, so that the neat, clean sections can be seen, and they attract the attention of all who see them; and thus are many enticed to purchase.—Many persons of moderate means, but of good taste, will purchase the glassed sections in preference, when they would not handle the unglassed ones. They look so neat and clean, and really lovely, and so secure from dust that they will say, give me none but the glassed boxes; while the laborer, who never leaves an order, but makes his purchase and takes it along with him, will say to himself, those not glassed are just as clean and neat, and I will save paying for the glass and have more honey, and he purchases and takes it home. The grocer who keeps honey put up in such an attractive form will sell largely, because the eyes of the purchaser admire it; but if such is seen as I described that I saw at the grocery store alluded to above, you may be sure there will be no desire to either purchase or eat it.

Now let me fancy a case, which, no doubt, will be a true one, and will show how to get up a demand. You may go to a grocer who has some honey on hand, rather repulsive looking, and ask him if he wishes to purchase some nice, comb honey, and he will say, No; I have some here that I have been trying to sell for six months, and nobody will buy it. No, I do not wish any. Do not quit him or be discouraged; show him a crate filled with such sections as those above described, in the nicest shape for market, and tell him to keep it in the crate and only take it out as he sells it, and that he will very soon be able to sell it. If he says, No, I cannot sell it, leave him a crate anyhow; saying, I know you can sell it. Sell it for me, at such a price. I will run the risk. I will call around in a week or two and see what luck you will have.—After a while you call and find that he has sold the whole crate; and he will say, See here, Mr., I never saw honey sell like that. I kept it where every one who came into the grocery could see it. They say that one of those little boxes is just enough for tea or breakfast. Why, I could have sold,

easily, two such crates; next time you come round, bring me 3 crates; I will try more. You do so; he sells them and is now ready for 6 or 8 crates and will tell you that there is no trouble to sell such honey as that, for it sells itself. All a customer wants, is to see it. Now, my friends, you have made a market and a demand right here; and you can do the same with a dozen grocerymen that you have with this one, and the cry will be for more, and your name being on every box, your grocer will say that his customers come in and ask, Have you any more honey with Col. Mann's name on it, or Mr. Williams' or Mr. Kepler's or Mr. Clifton's, as the case may be. You see, it is now known, and you will keep this market as long as you will put it up in an attractive form and in the most marketable shape; and as the demand increases, you will be able to secure a better price.

Now, do not think that the supply is in advance of the demand, for not one pound is used where there should be 1000. You say, how shall we accomplish this? I reply, by creating the demand. Can this be done? Most undoubtedly; when you open up new avenues of sale and enlarge the older ones, you will find honey on the table of the poor man and the medium liver, as well as the rich man. You will find at every meal, at the hotel where you stop, nice honey on the table, which now you never see. There is an increase of consumption and consequently an increased demand, and this you do by placing it in the hands of every grocer and provision merchant, even the confectioner, for it will not only look, but be nicer than his candy, and just as clean and neat for him to handle; and in this way you both stimulate a taste for honey, and at the same time create a market, thus the demand and consumption will increase, and where one pound was used, now 1000 will be sold. Never let a grocer keep any honey of your brand that has become dull looking or smutty; rather take it away and give him fresh in its place, or you may lose your reputation as a producer.

What I have just related has taken place, and can be carried out on a large scale, if we are only true to ourselves and offer it to the trade in the best marketable shape.—Your extracted honey should be put up, each kind by itself, the white clover, basswood, &c., and they retail very fast in jars, from jelly cups, &c., up to quarts, &c.—Label all with your name and the kind.

A word about the size of sections. I think we should have different sized sections; say $4\frac{1}{4} \times 4\frac{1}{4}$, being 8 to a broad Langstroth frame; $4\frac{1}{4} \times 5\frac{1}{2}$, being 6 to a Langstroth frame and sections 5×6 . The first holds about 1 lb., the second $1\frac{1}{2}$ lbs., and the 5×6 , say 2 lbs. A 10×12 glass will cut out 4 pieces for the 5×6 sections. I like these better than Heddon's $4\frac{1}{4} \times 6\frac{3}{4}$, which I consider a bad size.

In regard to the supply, see what large amounts of honey will be exported from this country by the European demand. In the March number of the *Bee-Keepers' Magazine*, I notice that there is a very small supply of nice honey in New York now, and that there are purchasers advertising for extracted, white clover and bass-

wood honey, and purchasing all they can get, for which they pay 22c. per lb., cash; and like it all the better if candied. Take this into consideration, with the 100 tons brought by Harbison, about one year ago, to New York city, in addition to the very large amount sent there from the Eastern and Western states, and still the market was good and this great supply did not break it. Does not the prospect look brighter? I certainly need say not, if we only remain true to ourselves, and keep our honey pure and unadulterated and put it into an attractive form upon the market.

Increase our home demand, and our pets (for whom we pay neither rent nor pasture, and who labor for us and board themselves,) will do the work for us, and put up our honey as neat and as nice, and better than it can be done by any other insect, or man even, for it is their province, and instinct given them by the Creator for a wise and good purpose, and for the benefit of mankind. Let us all work, therefore, to create this demand and market. Mr. Heddon says we must maintain an independence in the market, if we wish to succeed. This can be done by creating a demand, and the demand by an increased consumption. I advise all to read Mr. Heddon's article on "Marketing Honey." It is full of sound sense. I have read all his articles, for the past year or two, with much interest. He strikes at the root of all things, and gives many thoughts for the bee-keepers to digest. If what I have penned will produce any good, or stimulate our society to renewed energy in getting up honey in the most marketable shape, and to increase the consumption, I shall be well repaid.

A. FAHNESTOCK.

N. Y. City Bee-Keepers' Association.

The semi-annual meeting of this Association was held April 27th, in room 24 of Cooper Union, New York, J. S. Coe presiding.

Letter from W. S. Slocum read, stating his removal from Brooklyn to Red Bank, N. J., present duties and occupation making it impossible for him to act as secretary, and tendering his resignation. Accepted with expressions of regret, and Ehrick Parmly elected to the office.

Letter from Theo. F. Read, treasurer, read, tendering his resignation, as he could not be present at the meetings of the association and attend to the duties of the position. Treasurer's report read and accepted; but resignation not accepted. He is therefore continued in office with strongest expressions of his value to the association as treasurer, and as an active working member, and keen observer.

Minutes of last meeting read and adopted.

J. L. F. Smith spoke on Article III. of the Constitution relating to fees, and it was resolved that as the treasury is in good condition, and the expenses of the association small and likely to be fully met by the initiation fees of new members, that no further provision be made at present for fees from other sources. Funds in the treasury, \$29.14.

The attendance was not large, but all took

part in the proceedings, and a number of regrets at inability to be present were received. The reports on wintering showed unusual success, in part owing to the favorable winter, but more to an increase of knowledge on the subject through our journals. J. E. Callbreath wintered 300 colonies without any loss. Others state marked success on a smaller scale; some wintering on summer stands, others in cellars.

The following statement from T. F. Reed, Brooklyn, April 26, 1878, was read: "On April 20, while handling my bees, I met with a strange incident. I had a weak colony which I wished to strengthen, and to that end removed two full frames of capped brood from a strong hive and placed them in the weak one. While I was thus engaged, the dinner bell rang, and in my haste I neglected to shake all the bees from one of the combs before placing it in the hive, and closed the hive and went to dinner. When I came out again I noticed bees fighting on the alighting board. I immediately suspected the cause of the trouble, and upon lifting out some of the frames saw the bees clustered upon the bottom board. I dispersed them with a little smoke, and looked for the queen but could not find her; stepping in front of the hive I noticed a knot of bees on the alighting board of an empty hive near by, and upon examination found it contained the queen. I separated her and she escaped from me into the hive. I opened the hive as soon as possible and found her surrounded by bees, which were trying to bite and sting her. I picked up the bees and queen, and after picking the bees off, I noticed that one of her wings was a little elevated; upon looking under it I saw a bee's sting sticking into her left side just behind the wing and a little below it. With considerable difficulty I managed to extract it, and the wounded side bled. I caged her until the 22d, when I liberated her and she was accepted. I saw her to-day running around on the combs. It is a young queen which I raised this spring, and I think she was fertilized before this took place. I have seen bees stung and die almost immediately, and supposed that this queen would, but she does not seem at all disposed to do so. I have never heard of a similar case. I am very sorry that I cannot be present at the meeting, but hope it will be lively and interesting."

THEO. F. REED.

S. Cary, Roselle, N. J., remarks on purchasing bees and his success: "Lost half in wintering." Careful fall examination recommended, and other requisites to success.

The question of stimulating by feeding was discussed. Mr. Cook had not succeeded, Mr. Coe reported marked success, thereby securing surplus from earlier sources than he otherwise would have secured. Feed just enough to stimulate breeding. A trifle more in bad weather, and regularly as to time, but not so much that they will store any. All should be consumed in rearing brood.

J. Van Winkle, Jr., feeds by hanging a frame of honey outside the division board and the bees can take it as they require it. His experience is only of one year. Began with 5 colonies, increased to 17. All now in good condition but one, which had a drone

laying queen. Advised to remove the drone laying queen and to strengthen by one or more frames of sealed brood, according to their strength to take care of it, and he would soon have a strong stock and a young queen presiding over it. Feeding can be done to best advantage by giving close attention to the weather, sources of supply, etc."

Mr. Coe—"The end desired is to bring bees in best condition for the white clover harvest, and described his feeder which he places on top of the frames; uses a quilt in place of a honey board. Begins feeding in February, a spoonful twice a day regularly, in bad weather a little more. Recommends all to have feeders and to use them judiciously. Feeds white sugar syrup about the thickness of honey; brings to a boiling point; sometimes put in a little soda. Puts on boxes the beginning of white clover harvest. Some succeed in getting honey stored from fruit blossoms by early feeding. Mr. Read is now experimenting to secure fruit blossom honey from the body of the hive, and will soon report. Bees will not breed much when not gathering stores. One season after white clover, fed three spoonfuls a day to each hive, and increased breeding very much and never had such good fall success. One neglected comb, so full of bee bread that moths had not attacked it, I put in a strong colony, and in eight days they had cut it down nearly to the base of the cells, built it out, and stored in it eight pounds of honey. The planting of trees on the road-side and elsewhere for ornament, preference given to those yielding honey was advocated. Much can be done in this direction by the formation of village improvement societies. Basswood, tulip, and sycamore maple particularly recommended.

Mr. Knapp's experience extended over 17 years; has kept from 1 to 12 hives, and has hitherto pursued the box-hive system and killing, but now has 15 colonies, which he thinks combines all the good features of the various hives exhibited at the American Institute. He entered upon a detailed description, which, in the absence of a hive or model, was not very clear. It was therefore proposed by Mr. Crouch that hereafter, all who desired to explain the hive they used, or anything employed in the apiary, bring a model; and Mr. Van Winkle further suggested that at our next annual meeting, each member bring a model of the hive he uses, which met the approval of all present.

This closed the meeting, and the members then held an informal talk on subjects relating to the apiary.

EHRICK PARMLY, Sec'y. pro tem.

Albany Co., N. Y., Association.

The bee-keepers of Albany county met at Clarksville, May 11, 1878, and organized a county association. The constitution and by-laws of the North-Eastern Association, were offered, voted upon, and adopted as those of the organization.

The following officers were elected for the ensuing year: President, H. W. Garrett; Vice-President, A. Snyder; Secretary



T. F. C. Van Allen; Treasurer, James Markle. The next convention will be held during the coming fall at Chesterville, Albany county at such time as the executive committee shall decide upon.

T. F. C. VAN ALLEN, Sec'y.

North-Eastern Wis. Convention.

The Bee-keepers called to meet at Appleton, April 11, assembled as advertised. A. H. Hart was chosen Chairman, D. Huntly, Secretary.

Mr. Hart stated the object of the meeting in a few, well-chosen remarks.

A report was then taken, and a pleasant discussion followed.

Mr. Bishop produced from 58 colonies, in the spring, 9,600 lbs. of honey; 4,300 box, 3,000 extracted, and the rest unfinished comb. Wintered in house.

Mr. Potter, of Calumet Co., obtained 350 lbs. from one hive; 260 lbs. comb, 90 lbs. extracted. Bees not allowed to swarm. He wintered in house, with wire-cloth over the entrance. Counted 30 dead bees, in the spring, from 1 hive.

It was the general opinion that many bees were lost in carrying the dead ones out. Comb foundation was used with the greatest success by many; but it was absolutely necessary to have the wax pure.

It was universally acknowledged that the price of honey must be low, in order to compete with preserved fruits and syrups, and that then there was an almost unlimited market at home, which was the proper and most profitable place to sell.

Mr. Hart stated that bees, this season, commenced bringing in pollen the 30th of March.

Mr. Maryatt gave an instance of a colony that was chilled till apparently lifeless, and was restored by gentle heat; and from which the owner now has 120 colonies.

Chas. Wolcott exhibited a model hive.

Mrs. Dunham, a bee-feeder, of her own invention; also a division-board.

Mr. Bishop, comb foundation.

The North-Eastern Wisconsin Bee-keepers' Association was then organized, and the following officers elected:

A. H. Hart, of Appleton, President.

R. Bishop, of Sherwood, Vice President.

J. L. Kittell, of Menasha, Treasurer.

Frances Dunham, of Depere, Secretary.

To meet semi-annually. The next meeting to be held at Depere, Brown Co., Wis., Tuesday, Sept. 3.

All county societies are requested to send, at least, 2 delegates; and, if possible, to have their meetings previous to Sept. 3.

There will be important papers read, and discussions upon the proper mode of wintering bees in this northern climate; also the improvement of the home market, &c.

It is earnestly requested that all interested in bees should join the Association, and come prepared to give reports of their production of honey for the season, so that an estimate may be formed of the amount of the summer's yield, and prices settled accordingly. FRANCES DUNHAM, Sec'y

Western Ill. & Eastern Iowa Society.

The third semi-annual meeting of the Western Illinois Bee-keepers' Society was held at Burlington, Iowa, May 7 and 8, 1878.

The meeting was called to order at 10, a. m., by the President, D. D. Palmer, of Eliza, Ill. The attendance of members was quite large, and exceeded that of any previous meeting. During the day, 49 new members were added to the roll, as follows:

J. A. Thomas, Mt. Pleasant, Iowa.
 Alvah Reynolds, Oneida, Ill.
 E. D. Godfrey, Red Oak, Iowa.
 George Parks, Muscatine, Iowa.
 W. F. Dougherty, Mt. Pleasant, Iowa.
 C. F. Healy, Muscatine, Iowa.
 H. F. Poggendorf, Iowa City, Iowa.
 S. O. Thomas, Burlington, Iowa.
 William H. Smith, Burlington, Iowa.
 H. D. Walker, Mt. Pleasant, Iowa.
 J. E. Chapin, Oquawka, Ill.
 D. Rider, Fairfield, Iowa.
 A. Simons, Fairfield, Iowa.
 H. M. Noble, Swedesburgh, Iowa.
 J. Valentine, Burlington, Iowa.
 L. Allen, Wilton, Iowa.
 S. J. McKinney, Burlington, Iowa.
 G. W. Trimble, Mt. Pleasant, Iowa.
 O. Clute, Keokuk, Iowa.
 Peter Ness, Burlington, Iowa.
 J. Wilson, Springdale, Iowa.
 C. T. Penrose, West Branch, Iowa.
 Miss Lottie Brayman, Monmouth, Ill.
 Loren Hanchet, Burlington, Iowa.
 E. A. Hanchet, Burlington, Iowa.
 S. E. Taylor, Burlington, Iowa.
 Richard Lord, Muscatine, Iowa.
 W. H. Furman, Cedar Rapids, Iowa.
 R. A. Parker, Abingdon, Ill.
 W. G. Latimer, Kirkwood, Ill.
 Harmon Brown, Galesburg, Ill.
 William E. Bell, Dover, Iowa.
 Abner Hanna, Middletown, Iowa.
 Charles Whitlock, West Point, Iowa.
 John Danley, Monmouth, Ill.
 Paul Lange, Burlington, Iowa.
 E. T. Gardner, Burlington, Iowa.
 Mrs. E. C. Crane, Burlington, Iowa.
 Mrs. L. P. Wilson, Burlington, Iowa.
 Dr. D. G. Campbell, Keithsburg, Ill.
 S. H. Black, Sciota, Ill.
 N. Grigsby, Blandinsville, Ill.
 G. Kraetzer, South Chicago, Ill.
 Thomas G. Newman, Chicago, Ill.
 Mrs. William Mercer, Burlington, Iowa.
 H. J. Elliott, Burlington, Iowa.
 J. K. Brown, Morning Sun, Iowa.
 J. C. Shirk, Morning Sun, Iowa.
 B. O. Everett, Toledo, Ohio.

The following address of welcome was given by Dr. I. P. Wilson, of Burlington, Iowa:

Mr. President, Ladies and Gentlemen:

It affords me real pleasure to welcome the members of the Western Illinois Bee-keepers Society to the Orchard city—the city of flowers. Burlington does not stand, like Rome, upon her *seven*, but *three* hills, and these are covered all over with blossoming trees and sweet-scented clover, that furnish a bountiful supply of sweetness for the millions of little winged workers, that find a home in our city. And when these supplies fail, they wing their way across the "Father of waters," and gather from the low lands, along the shore of your "sucker" state, new supplies, in time of need.—Truly, this is a fitting place for a bee convention. I am not aware that a meeting of this kind was ever before held in our city. The present occasion is, therefore, one of peculiar interest, especially to those of us who have not had the privilege, hitherto, of meeting in conventions of this kind.

The time has now come when none but "old fogies" work single-handed and alone.

We can no longer afford to get along without our journals, and our conventions.—The time has come when knowledge must not be hid under a bushel, nor locked up in human hearts. Anciently, if a man made a valuable improvement or discovery, he regarded it as private property. He did not seek the columns of a journal or the ears of a convention, to make known to others the advantages to be derived from his improvement or discovery. He did not seek an exchange of thoughts and experiences, as we do to-day.

The eager faces now before me indicate that you are here for a purpose, and I feel warranted in saying that your purpose is not purely a selfish one. While you are here to receive the benefits to be derived from the experiences of others, you are also here for the generous purpose of imparting knowledge.

It seems to me that we may not, as a generation, boast of having more brains than did our fathers of a few centuries ago, but we may boast that we live in an age of progression, that superstition, selfishness and secretiveness do not reign as once they did. Men, now, delight more in philanthropy—more in the brotherhood of man. There is something pleasing in the thought of helping one another. Imparting useful knowledge to others does not impoverish us, but rather it enriches our hearts; not only so, but the heart of him who receives the benefit is melted into kindness and gratitude; and so, giving and receiving combine to gladden our hearts and make us happy.

Ladies and gentlemen, I feel that the time of this convention is precious, and I ought not occupy your attention with extended remarks. The "*Mysteries of Bee-keeping*" is, to us, a fascinating study.—How many useful lessons our busy little workers may teach us. The valuable time, the importance of energy and activity, and the great good that may be accomplished by persistently doing, little by little, what our hands find to do, are the lessons taught us by their every day lives.

"How doth the little busy bee
 Improve each shining hour,
 And gather honey all the day,
 From every opening flower."

Our little pets are very diminutive, as regards their physical proportions, but as workers, and as *stingers* they are immense. But every rose, you know, "has its thorn," so has every bee its sting. Handle the rose with care, and enjoy its rich fragrance, and its cruel thorns may not pierce your sensitive nerves. So in handling your bees, do it with confidence, with gentleness, and with care, and the poor little creature's only weapon of defense will seldom pierce your brow.

Ladies and gentlemen, in behalf of the citizens of Burlington, and especially the bee-keepers of this city and vicinity, allow me to greet you, and bid you *welcome, welcome, thrice welcome* to our city.

Motion carried that a committee of three be appointed as a committee of questions and arrangements, which were appointed, as follows: Dr. N. H. Derr, L. H. Scudder, and O. Clute.

On motion, the President and Secretary were added to the committee as *ex-officio* members.

The remainder of the forenoon was occupied by parties having articles on exhibition, in explaining the same. The following were exhibited: Langstroth bee-hives and section boxes, by Kirk & Abbott, Muscatine, Iowa. Tool box, for use in the apiary, by D. D. Palmer, Eliza, Ill. Prize sections and comb foundation, (home made), by L. H. Scudder, New Boston, Ill. Centennial bee-hive, by H. F. Poggenpohl, Iowa City, Iowa. Section boxes, honey, queen cages, grape sugar, &c., by T. G. McGaw, Monmouth, Ill. North Star Hive, Everett's honey extractor, with copies of the various bee books and publications, by T. G. Newman, Chicago, Ill. Extracted honey and frame for nailing section boxes, (Harbison), by Dr. N. H. Derr, Keithsburg, Ill. Model of wire cloth window, for letting out, and keeping out bees from a room, by Will M. Kellogg, Oneida, Ill. Candied honey and sample of glucose, by Chas. & C. P. Dadant, Hamilton, Ill. Bingham smoker and Langstroth hive, by Geo. Bischoff, Burlington, Iowa. Dove-tailed section boxes, from Barker & Tillman, Defiance, Ohio; presented by Dr. I. P. Wilson, Burlington, Iowa. Advance Bee hive, J. C. Shirk, Morning Sun, Iowa. Concord bee hive, by Kretzer Bro's, South Chicago, Ill.

The afternoon session met promptly at 1:30, p. m. The Secretary read a short history of the Society, from its founding to the present time, and an abstract of its proceedings.

Motion carried that Eastern Iowa be added to the name of the Society.

The following questions were then discussed:

ITALIANS VS. BLACKS.

Dr. N. H. Derr.—I prefer black bees.—Italians stick to the combs; the blacks are much the easiest to get off; but we can find the queen easier among Italians. It is claimed that the Italians defend their stores the best; I think the blacks beat them, at that. I think blacks produce finer honey than the Italians; they breed the best, and are fully equal to the Italians. Italians get better care, hence give better results.

Chas. Whitlock.—Many get humbugged; get hybrids in place of pure Italians, thus condemning the Italians. I found that my Italians had plenty of honey, while the blacks had but little in time of little honey flow. Italians are inclined to build comb upwards. I think light queens are as good as dark ones.

C. P. Dadant.—I think the hybrids are better honey gatherers—blacks scatter their honey. Italians pack it close, fill up brood chamber and crowd out the brood.

L. H. Scudder.—I think Mr. Derr has been deceived as to the quality of honey.—Italians fill the cells nearer the caps than the blacks, but there is no difference in the honey.

D. D. Palmer.—Italians are a trifle larger than blacks. We should space their combs a little wider apart. A small cluster of Italians will defend their hive as well as a much larger cluster of blacks. In a dry



time my Italians bother me, while out searching for honey, while Mr. Derr's blacks did not bother honey close at hand.—I think the Italians are worse to rob than blacks.

T. G. McGaw.—At my place, the blacks are the first to go "nosing" around for stolen sweets.

Dr. I. P. Wilson.—I had a stock of Italians rob out 2 or 3 neighbors' stocks; stored the honey in boxes, while the rest of my stock were quiet.

TO PREVENT NATURAL SWARMING, AND TO SECURE THEM IF THEY DO SWARM.

T. G. McGaw.—I usually divide from the middle to the last of June, put on boxes when clover comes, and clip the queen's wing, if a swarm comes out; cage the queen, move old hive away, put a new one in its place, put caged queen under quilt of new hive and release after the swarm returns. Give old stock a young queen, or capped queen cell. I don't believe in dividing too early.

D. D. Palmer.—I have tried clipping queens; don't like it. My prevention is to give plenty of surplus room, comb foundation, ventilation and shade. Think it a waste of time to return a first swarm. I keep an average of one-half from swarming at all.

IN WHAT KIND OF A BOX SHALL WE PUT UP COMB HONEY?

D. D. Palmer.—First, look to your market. Who is to buy and consume your honey? If your neighbors, almost any shape will do. Cut out in buckets is a good way; but I prefer extracted—no wax for my stomach. Put plenty of honey on your table; make it free to your neighbors when they come in. In the smaller towns, light sections without glass; in the large cities, where they must and will have a fancy article, there is no sale for 6 lb. boxes and the like; it must be nice, smooth, light sections, glassed on both sides. This package can be delivered around the cities free from dirt and insects. Very few people in large cities go to the stores to get their honey; it is brought to them.

T. G. Newman.—I agree with Mr. Palmer. He has said section boxes *must* be glassed for the city trade. This is in favor of the producer and against the consumer, but if they *will* have it glassed, it is not our fault. Always put on glass after it is filled; it makes a neater and cleaner appearance.

C. P. Dadant.—We sold our honey in St. Louis market with the crate glassed, sections unglassed.

QUEEN RAISING.

"Are queens grown by bees, in natural preparation for swarming, any better than those grown in strong colonies that are forced to raise queens?"

T. G. McGaw.—I have seen just as good queens raised artificially as by natural means.

Chas. & C. P. Dadant.—Would prefer large to small queens. We see no difference, as to: prolificness, in dark or light colored queens. We think dark comb produces dark queens, as a rule. We also

think the color of honey used has much to do with the color of bees.

W. H. Furman.—I take a full Langstroth hive, divide into 4 spaces, fill with strong combs of brood, and raise my queens that way, and find no difference in prolificness of queens, as to size. Have seen light queens put in black colonies, and turn dark in 48 hours. Would as soon use nuclei to raise queens as full colonies.

WHAT SHALL BE DONE WITH A COLONY HAVING A FERTILE WORKER?

E. D. Godfrey.—Break up the colony, and distribute the combs to other colonies.

W. H. Furman.—Change places with some other colony.

C. P. Dadant.—If a weak colony, break it up; if a strong one, try to save it. Have seen 10 or 12 fertile workers laying at once. Give frames of hatching bees, cage a queen in the hive for a time, then release.

ARE TRIANGULAR BLOCKS, WITH GROOVES CUT IN THE UNDER SIDE, OF ANY REAL VALUE AS MOTH TRAPS?

H. F. Paggenpohl.—I think they are valuable, but keep strong colonies and there is no need for moth traps.

IS IT WISE TO FEED GRAPE-SUGAR TO STIMULATE BROOD REARING, DURING THE INTERVAL BETWEEN FRUIT BLOOM AND WHITE CLOVER?

Richard Lord.—I don't like it, as it fills up the cells with granulated sugar.

C. P. Dadant.—Grape-sugar contains so much matter besides sugar, that when added to wine it injures it; hence, we think it is not good for bees.

At 8 p. m. the session was favored with a lecture from T. G. Newman, of the AMERICAN BEE JOURNAL, Chicago, Ill., on "Honey as Food and Medicine."

SECOND DAY'S SESSION.

Called to order at 8 p. m.

ADULTERATION OF HONEY.

A resolution was presented by Chas. & C. P. Dadant, of Hamilton, Ill., for the appointment of a committee of three, to draft a petition to Congress, to have laws passed against the adulteration of honey and all sweets. This committee is to correspond with the secretaries of all the bee-keepers' societies in the United States, asking them to unite in getting signers to the petition.—The expenses of this committee to be taken out of the funds of the Society.

This resolution drew out an animated discussion, after which the resolution was adopted and the committee appointed as follows: Chas. Dadant, Hamilton, Ill.; T. G. Newman, Chicago, Ill.; O. Clute, Keokuk, Iowa.

WHICH SHALL WE PRODUCE, COMB OR EXTRACTED HONEY?

N. H. Derr.—I think we should produce either, according to our market.

O. Clute, of Keokuk, Iowa, read the following essay:

THE DEMAND FOR COMB HONEY?

Some producers of honey think the de-

mand for comb honey will decrease, and that extracted honey will almost supersede it in a few years; hence, in some quarters there is a tendency to produce only extracted honey. It is well to look at this subject carefully, and not allow ourselves to be led into unwise methods of work, by conclusions formed hastily and on insufficient premises.

1. I have not a word to say against extracted honey. When it is well ripened in the hives before extracting, it is, without question, a superior article. Such good extracted honey, put up in convenient and elegant packages, will continue to sell readily. The demand for it ought to increase, and will increase.

2. But a very large part of the consumers of honey have a strong prejudice against extracted honey. As it comes into the market in the same shape as *strained* honey, and as these consumers are not familiar with the methods of bee-culture, it is only natural that they should rank it with strained honey. This prejudice is, of course, ill-founded. It is a prejudice, which is for the benefit of all honey-producers to labor to remove. Nevertheless the prejudice exists, and will continue to exist in a decreasing degree for some time to come. While it exists, it will keep up a demand for comb honey, which producers will do well to supply.

3. After some years, the consumers of honey will generally come to understand that well-ripened, extracted honey is a most excellent article, that it is just as pure, and of just as good flavor as comb honey of the same kinds. When consumers generally learn this, will the demand for comb honey largely decrease, and finally cease altogether? To this question not a few producers of honey are inclined to say, yes.—But there is another element of the problem, which, I think, they do not sufficiently consider, an element which, it seems to me, will not only keep the demand for comb honey as great as at present, but even increase it much beyond what it now is.—Let us for a moment consider this element. A purchaser goes to a merchant to buy cloth; he is shown different pieces, among which he finds two, of about the same quality, as to durability, but one of them is of finer texture and more elegant finish than the other. This finer piece does not promise to be quite so durable as the other, and it is somewhat higher in price. But in a very large number of cases, the purchaser will choose this more expensive article.—Durability is, with him, not the only quality by which he judges the value of cloth. He wants a garment that will be neat and attractive, as well as durable.—Hence, he is willing to pay a higher price for the fine goods of elegant finish.

A man wants to buy a cow. He is shown a number of animals of about the same age, size, and quality as milkers. He looks them all over, and is sure to pick out the cow that has the points that make an animal beautiful in the eyes of a *connoisseur* of cattle. Other qualities being as good, he prefers the animal that is beautiful, and willingly pays a higher price for such animal. The stock-breeder soon finds that beauty is a marketable quality.

The house-keeper goes to her grocer to buy butter for her table. She looks over his stock. Some of it is not of good color, and has a mussed, untidy look. She passes over this with contempt; but when she sees bright, yellow rolls, solid, neatly shaped, nicely stamped with an appropriate design, she is at once desirous of trying it, and if it is not positively poor in quality, she will buy it. It may not be quite so sweet and delicate in flavor as some of the mussed butter, but its better appearance makes it command, readily, a higher price. High color has become, in some butter markets, so important that artificial coloring matter is freely and openly used to give the butter the desirable tint. The color, the appearance, and the beauty of the butter is a most important item, and has a ready market value. This is so well understood that a large number of dairymen are now turning their attention to the production of a really good, highly colored, often artificially colored butter, which they send to market in $\frac{1}{2}$ lb. $\frac{1}{4}$ lb. and 1 lb. *prints*, and for which they get a gilt-edged price.

The strawberry is one of the most popular fruits in the market. In the last 25 years its consumption has increased immensely. It is produced in the East, West, North and South. It is found in every market, even in the smaller villages. Let any purchaser go to a fruit stall to select berries for the tea-table, and they will choose those that are largest, plumpest, best-colored, and most beautiful. It is a well-known fact that often strawberries that are most delicious in flavor are not good market varieties, because they are not so beautiful as some other varieties of inferior flavor. Most of the purchasers understand that they are sacrificing something of delicate flavor to beauty of appearance; yet, they willingly pay a higher price for the less delicate fruit.

Indeed, the beauty of the articles which appear upon our tables is an important point with us all. When we sit at our meals, we like to satisfy, not only the appetite for food, but also that love of beauty, which is found more or less in all. In the most humble homes we find the good housekeeper has a commendable pride in the attractive appearance of her table.—The spotless linen, the few articles of glass and silver, the few flowers that she has found leisure to cultivate, lend a ray of beauty to her humble board; and she serves the food, prepared by her own skillful hands, with as much elegance as she can command. Larger wealth gives greater facility for gratifying this love of beauty, and the tables of the rich often charm the eye with their array of china, and glass, and silver, from the hands of the most artistic workmen, and with viands prepared by cooks with whom their profession has become almost a fine art.

4. There is, perhaps, no article for the table that is more beautiful than the best comb honey. The delicate comb, of fairy-like structure, the crystal-white or golden-tinted honey, of delightful fragrance, are most attractive to the eyes of all. It seems to me that this element of beauty in comb honey will not only keep the demand for it as great as it now is, but as people become



more cultivated and more wealthy, will increase the demand to a large degree. After people become fully educated to the real merits of extracted honey, and after such honey has come into very wide use, the demand for comb honey will continue and increase. Many people will be willing to pay a higher price for it than for extracted honey.

It seems to me that the premises upon which this conclusion is based are correct, and that the conclusion inevitably follows from the premises. It seems to me that the demand for comb honey is a legitimate demand, based upon the intrinsic qualities of the honey; that this demand will be a constant and increasing one.

If this is true, it is wise for producers of honey to prepare to supply this demand in such a way as will be satisfactory to the consumers and profitable to the producers. What this satisfactory and profitable way is I leave to be decided by those who have had wide and successful experience.

Keokuk, Iowa, May 6, 1878. O. CLUTE.

C. P. Dadant.—We favor extracted honey. Rich people can afford to buy nice comb honey, at a fancy price, in fancy boxes, glassed. For the working class, we must put it up without glass and learn them to eat extracted honey—a cheaper and more wholesome article.

HOW TO PREVENT AND CURE ROBBING ?

J. A. Thomas.—Place asparagus or other grass over the entrance.

Will M. Kellogg.—Don't handle your bees when they can get nothing from the flowers; give them a small entrance at such a time, and leave no sweets exposed to get them demoralized. I use cold water to break up robbing.

HOW TO CARRY BEES THROUGH SPRING ?

Dr. I. P. Wilson.—Keep them from flying as much as possible, shade and keep from the wind; face the hives North; they are less liable to come out and get chilled.

Will M. Kellogg.—Keep them in their winter quarters, as long as we can possibly keep them quiet.

THE DRAWING OF PRIZES

was next in order, 9 more prizes being added at this meeting, resulting as follows :

Prize 1—A full stock of Italian bees, with an imported queen, given by Charles Dadant & Son, Hamilton, Ill.; drawn by L. H. Scudder, New Boston, Ill.

Prize 2—An imported queen, given by Charles Dadant & Son; drawn by G. Kretzer, South Chicago, Illinois.

Prize 3—An imported queen, given by Hardin Haines, Vermont, Ill.; drawn by T. G. Newman, Chicago, Ill.

Prize 4—A queen, bred from an imported Cyprian queen, given by Hardin Haines; drawn by H. D. Walker, Mount Pleasant, Iowa.

Prize 5—A tested Italian queen, given by T. G. McGaw, Monmouth, Ill.; drawn by Dr. D. G. Campbell, Keithsburg, Ill.

Prize 6—A dollar queen, given by T. G. McGaw; drawn by E. D. Godfrey, Red Oak, Iowa.

Prize 7—One dozen Sweet Home raspberry plants, given by D. D. Palmer, Eliza, Ill.; drawn by H. J. Elliott, Burlington, Iowa.

Prize 8—One plant each of the following named raspberry plants—Doolittle, Mammoth Cluster, Golden Thornless, Seneca, Miami, Ganargna, Brandywine, Philadelphia, Lumb's ever-bearing, Davidson's Thornless and Brinkley's Orange, given by D. D. Palmer; drawn by Miss Susan R. Meadows, Abingdon, Ill.

Prize 9—A double portico Langstroth bee-hive, complete, cap covering both porticoes, honey board, full set of section honey boxes, with shipping crate for same, given by Kirk & Abbott, Muscatine, Iowa; drawn by W. H. Furman, Cedar Rapids, Iowa.

Prize 10—A Langstroth hive, given by George Blachoff, Burlington, Iowa; drawn by M. T. Sharp, Oquawka, Ill.

Prize 11—A tested queen, or 2 settings of buff Cochin or Braham eggs, given by Charles Whitlock, West Point, Iowa; drawn by D. D. Palmer, Eliza, Ill.

Prize 12—A setting of partridge Cochin eggs, given by H. D. Walker, Mount Pleasant, Iowa; drawn by D. Rider, Fairfield, Iowa.

Prize 13—A pair of Pekin ducks, given by W. H. Furman, Cedar Rapids, Iowa; drawn by N. Grigsby, Blandinsville, Ill.

Prize 14—Two dozen Brandywine raspberry plants, given by Paul Lange, Burlington, Iowa; drawn by Harmon Brown, Galesburg, Ill.

Prize 15—A two-story Concord hive, given by G. Kretzer, South Chicago, Ill.; drawn by Alvah Reynolds, Onida, Ill.

Prize 16—A fourteen frame Langstroth hive, given by Richard Lord, Muscatine, Iowa; drawn by S. E. Taylor, Burlington, Iowa.

Prize 17—Two choice roses, given by Peter Ness, Burlington, Iowa; drawn by J. Valentine, Burlington, Iowa.

Prize 18—"Manual of the Apisary" given by T. G. Newman, Chicago, Ill.; drawn by Dr. N. H. Derr, Keithsburg, Ill.

After the drawing of prizes, Dr. R. L. Robb, of Burlington, Iowa, gave the following analysis of grape sugar, proving the article to be adulterated and unfit for use.—

SAMPLE A.—John Long—Partial Analysis.—This sample, as seen under the microscope, contains dextro-glucose starch (unchanged), pipe-clay, and a very few particles of pollen from buckwheat and sugar acari. By heat test. Rotary power the same at all temperatures plus 56°. Hence contains no levulose.

SAMPLE B.—Chas. Dadant & Son—White clover, crop of 1877.—Heat test at temperature 15° C. minus 25°; at 52° C. minus 13°; at 90° C. the sign changes to plus; hence contains levulose and glucose. The rotary power of glucose does not change at any temperature.

A vote of thanks was given the Dr. for his remarks.

The discussion of questions resumed.

HOW MUCH, AND WHEN SHALL WE USE COMB FOUNDATION ?

Will M. Kellogg.—Would only use narrow strips for guides and starters in section boxes, and narrow strips for guides, or full sheets of it in the brood chamber, used in medium or light colonies, or in outside frames of strong colonies. Would never have a swarm on to full sheets of comb foundation. Like foundation very much.

L. C. Axtell.—In using comb foundation in a heavy flow of honey the bees thin it out nicely; in a light flow, they leave the "fish bone" in the centre. Would only advise its use in the brood chamber.

Adjourned to 2 p. m.

AFTERNOON SESSION.

SECTIONS AND SEPARATORS.

"How shall we place the sections on the hives, and what shall we use as separators to secure straight combs ?"

T. G. Newman exhibited a Comb Honey Rack, filled with Prize Boxes, so constructed, that, by removing a wedge, all the sections and tin separators are loose and free to take out. He favored this style of using Prize Boxes. Tin is, by far, the best material to use for separators; paper, as proposed by some, will not do; bees gnaw it to pieces.

Others favored using an upper story, with the sections fitted into larger frames.

WHAT IS THE BEST METHOD OF ITALIANIZING AN APIARY?

E. D. Godfrey.—Buy an imported queen and raise your own queen, or buy one dollar queens.

D. D. Palmer, would use about the same plan.

DO TOADS EAT BEES?

T. G. Newman.—Toads *do* eat bees; there can be no doubt of it. It is so reported from almost every section of the country.

N. H. Derr.—Have seen toads catch bees, and once saw a fish catch a bee.

HOW CAN WILD BEES BE CAUGHT?

D. D. Palmer.—Place an empty box or hive near the location of wild bees; have a hole in it, with a tube run in near the centre of the box. Place sweets in the box, and they will find it and fill the box. Leave the tube out the first day; next day, catch the box full, then remove to a new location and give them some brood.

IS A BEE HOUSE PREFERABLE TO A HIVE IN THE OPEN AIR FOR THE PRODUCTION OF HONEY?

J. A. Thomas.—I prefer the hive, by all means. Have tried the house business.

D. D. Palmer.—For queen raising, the house does well; otherwise, not.

CAN TWO LAYING QUEENS BE KEPT SUCCESSFULLY IN THE SAME HIVE?

Chas. Whitlock.—Years ago I would have said no; think differently now. Have had a black and Italian queen in the same hive for several weeks; experimented with it, had queens in two cages, and after 48 hours put both in one cage; after a time I released both, and kept them both in the same hive for over 3 months.

WHAT IS THE BEST METHOD OF EXTRACTING HONEY, THE BEST PACKAGE FOR MARKETING IT, AND HOW SHALL WE INCREASE THE DEMAND FOR IT?

N. H. Derr.—Use a two-story hive, and put on an upper story as soon as honey flows freely; take out full combs, put in empty ones, take to room and extract; and so work with all your hives. Don't extract till most of the comb is capped over.—Would ship to a distance in barrels, and would put in stone jars for home trade.

O. Clute.—Mr. Dadant uses tin pails for shipping and selling extracted honey.

IS IT ADVISABLE TO PAINT THE INSIDE OF A HIVE.

Several thought not.

The following resolutions were presented and unanimously adopted:

Resolved, That we appreciate the kindness of the proprietors of Turner Hall for generously giving us the free use of their hall for our sessions, and that we thank them for the same.

Resolved, That the hearty thanks of the members of this society are tendered the citizens of Burlington for the cordial hospitality extended to us at this meeting.

Resolved, That the genial presence of Thomas G. Newman, the able editor of THE AMERICAN BEE JOURNAL, has added much interest to our meeting; that we tender him our thanks for his able address on "Honey," and that we commend him and his journal to the good favor of all bee-keepers.

Resolved, That Thomas G. Newman be appointed a committee to see the commercial editors of the Chicago dailies, and represent to them the importance of quoting *extracted* honey in their reports.

Resolved, That the earnest and efficient service of our able Secretary, William M. Kellogg, deserves, and hereby receives our most grateful recognition and thanks, and that we hereby authorize our Treasurer to present to him, in our behalf, an imported Italian queen bee, to be selected by Mr. Kellogg.

The society adjourned to meet at New Boston, Ill., October 12, 1878.

D. D. PALMER, *Pres't.*

WILL. M. KELLOGG, *Sec'y.*

Southern Kentucky Convention.

This Convention met at Glasgow Junction, Ky., on May 7th, and was well attended.

Meeting was called to order by Dr. N. P. Allen, at 10 a. m. After the reading of the minutes of the last meeting, which were approved; questions of general interest were asked by those desiring information, and answered by those who had experience.

Judge Dulaney asked how much cold it would take to kill a queen.

Dr. Allen said they could not stand much cold or neglect; in cold weather they ought to keep covered by the other bees; the older the queen the more cold she could stand; they should be put in the brood nest to keep them from being neglected, and explained the mode of raising queens, answering all questions pertaining thereto.

Mr. W. Cook wanted to know why the bees brought out so many bees and threw them away. Judge Dulaney stated that he had examined those that were brought out and thrown away and always found that they were in some way or another imperfect and were thrown away because they were of no service.

The following communication from Thos. G. Newman was read and ordered printed with the minutes:

MARKETING HONEY.

COMPANION APIARISTS:—If there is one subject of greater interest than another to every keeper of bees, throughout the length and breadth of the country, that subject is—"How to put up our Honey, in order to command the highest market price."

Heretofore, we have spent our time at Conventions, discussing such topics as the following: "What hive shall we use?"—"Which race of bees is the best—the natives or Italians?" "What extractor shall we adopt?" "Shall we winter our bees in or out of doors?" "Shall we build bee-houses?" and many others—all important and proper—but of vastly minor importance to that of "How shall our Honey be prepared for the Market, in order to command the highest price?" Truly wise was the remark of "one of old:" "These things ought ye to have done, and not to have left the other undone!"

Since last spring, the prices of honey has been steadily tended downward. Amidst all this depression, alike common to all products, what held up so unwaveringly the price of that honey prepared for the market by those "Kings of the East,"—Capt. Hetherington, G. M. Doolittle, N. N. Betsinger, C. R. Isham, and others? The



answer is—unexcelled quality, single-comb boxes and uniformity in packages!

In order to sell honey, it *must be attractive!* The large boxes of "yesterday" have passed into history—they are now required no more—while the "rising sun" of promise is Prize Boxes, in crates containing one dozen of these unicombed packages.

We are fond of "*object lessons*," and to enforce this thought, we have a few facts that have, within a month, come under our own notice. As the *facts* are all that we require on our lesson board—the party shall be nameless, as well as the State in which he resides—albeit he is something of a bee-keeper, and withal a good man; and if many may profit by his experience, we feel sure he will not object to being placed before the "class," to-day.

Our friend informed us that he had sent us some 600 pounds of comb honey, desiring us to dispose of it for him, to the best advantage.

It was packed in straw, surrounded by inch board slats; each package weighed, say from 50 to 75 lbs. The straw preventing the Railroad employes from seeing what the boxes contained, of course, they pitched and threw them about as they usually do such packages, until they had broken down three-fourths of the combs, and got them to leaking quite badly. Then they tore away the straw and helped themselves generally to the "sweets" therein contained. Of course, it was received in a deplorable condition. Arriving at the Store just as we were closing up for the night, it was carefully laid in single file on the floor till morning, when something like 25 lbs. of it stood in a pool on the floor. We proceeded at once to unpack it, and upon discovering how it had been prepared for the market, we were not astonished at the waste and leakage, though we were pained to see it.

Old starch and glass boxes, and such as could be packed up around any country grocery, had been given to the bees, in which to store their "surplus" honey.—They presented a varied and ludicrous appearance. No care had been taken to have the combs built straight, nor had the bees indulged in that kind of luxury. A few surplus, shallow frames had been used, but even they contained combs built so crooked as to be inseparable.

The boxes varied in height, from 3 to 7 inches, and in size, from 4 inches square to 2 feet square, or its equivalent, varied by size and shape. We will describe one of them accurately: It is 1 foot square and 3 inches high. One of its combs being 12 inches long, 3 inches high and $2\frac{1}{4}$ inches thick. Something like a dozen of the largest combs are candied solid, and all are irregular and very uninviting. Had this Honey been put up in the 5x6 one-comb boxes or sections, and crated, one dozen in a crate, it would have brought, at least, 10 cents per lb. more, and the leakage of one hundred pounds would have been saved. The glass boxes or crates would have permitted the Railroad men to see what it contained and they would have handled with more care. From \$60 to \$80 was squandered in this one transaction!

Let these *facts* enforce the necessity for

unicomb boxes and uniformity in packages and crates. All will readily see that it would have been far more profitable to the producer, and infinitely more attractive to the consumer, had it been properly prepared for the market.

To cure this evil, let the East and West, the North and South unite in the demand that one-comb boxes or sections of uniform size be everywhere used, and when shipped to market, let it be done in the Prize Crate. Let us study uniformity and attractiveness, and everywhere enforce it.

In New York, white clover, comb honey, of the best quality, is quoted in Prize Boxes and Crates at 25c. per lb., while precisely the same kind, grade and quality, in 4 to 6 lb. boxes, is quoted at 21c. per lb.; a difference of 4c per lb. in favor of the former!—The reason is obvious. Small, single-comb boxes or sections will sell at retail, at least, ten times as fast as the 6 lb. boxes—hence the demand for them. This is a powerful argument, and one that touches the pockets as well as the pride of bee-keepers, and should lead them to right conclusions.

The great honey marts of the country have closed out all their stocks! No first-class honey can now be obtained, either in the East or West—only the undesirable lots remain unsold, and even these are getting scarcer every day. If we will but meet the requirements of consumers, there need be no trouble about selling all the honey that can be produced on this Continent. The demand must and will increase yet a hundred fold, and peradventure a thousand fold within a short time. Aye, even now

"That good time is coming,
It hasteth nigh."

Extracted honey should be put up as attractively as comb honey, for it is just as good, just as useful, and just as desirable as when in the comb. The world needs information on the subject of Honey, and its uses; and to us, perhaps, is given the duty of imparting that knowledge. Let us, therefore, see to it that our work is done promptly and well. Your friend and co-laborer.

THOS. G. NEWMAN.

Several communications were then read, after which the books of the Association were opened for membership, when the following gentlemen joined the society: Judge W. C. York, G. T. Parker, Thos. McGood, night, W. J. Whitlock, J. L. Smith, J. L. Garvin, Edwin Moore, Chas. Renfro, A. D. Boyd, I. W. Sterritt.

The appointment of committees being next in order, the President made the following appointments:

ARRANGEMENTS.—I. N. Greer, Judge W. C. York, Joe Adams.

EXHIBITIONS.—W. Cook, J. W. Wright, J. W. Scribner.

STATE OF BEE CULTURE.—Judge W. L. Dulaney, Bob Munford, J. T. Gray.

QUESTIONS FOR DISCUSSION AT THE NEXT MEETING.—H. W. Sanders, J. W. Holman, W. T. Sears, Dr. N. P. Allen.

Mr. W. Cook being called upon for a speech, said he thought a general discussion of matters before the Convention of more importance than a set speech, and upon being asked, "What is the best honey-producer

ing plant," said he was a novice in the business, but like some of his friends, had caught the bee fever; thought white clover was the best plant known in this country for bees to feed on; said it grew wild abundantly in this section, and saw no reason why this should not be a great bee country; thought that the pear tree did not produce much honey; believed that the bees thought the cherry tree a good place to gather their sweets; wild plums were good; the poplar furnishes the most of our honey, and was sorry that the poplar trees were being destroyed so fast, no insect prayed upon its foliage; the North and Northwest had other trees that produced honey, but did not know whether they could be utilized in this country or not; all of our forest trees produce honey; blackberries, raspberries, both black and red, furnish honey to the bees; knew no plant that bees are fonder of than the raspberry; never noticed whether they liked the grape vines or not, but would judge they did; the strawberry did not furnish much honey, but thought white clover and the poplar the best plants that grow in this country for bees to get honey from.

Mr. B. Munford thought bees needed as much attention as anything raised on the farm; it was as necessary for them to be supplied with what they needed as for any of the other things raised; regarded white clover and poplar as the most bountiful nectar producers known in this section. If the weather was not propitious during the time the white clover and the poplar were in bloom, the bees would not get much honey. He gave an instance of his own observation. One day he set a pair of scales under a bee hive, and the bees during the day increased the weight of the honey $19\frac{1}{2}$ pounds, all of the increase he thought was made from white clover and poplar.

Dr. Allen said alfalfa was not a good honey producer; buckwheat is one of the best honey-producing plants we have; the linn furnishes more honey than all the blooms in the country put together; had seen it nearly drip with honey; knew of one tree that had furnished 16 gallons of honey in one season; red clover was a very fine honey producer but our bees can not reach the nectar.

The Association adjourned for dinner. A bountiful repast was spread in the chapel by the good housewives of the bee-keepers, and the bee-keepers partook of it as busily as do their bees of the sweets of the flowers and plants. Every one after filling himself with the best the land affords was ready to see the practical transfer of the bees by the committee that had been appointed by the President. Mr. W. W. Wright, J. W. Scribner, Jas. Garvin, Nat. Holeman, a committee, followed by all who wanted to see them transfer, repaired to the residence of Judge York, where they removed a hive of bees from one hive to another without arousing the anger of the bees, and without a single insertion of the little sting of a bee into any of the disturbers.

At the appointed hour, the afternoon session assembled and proceeded to business. The selection of a place for the next meeting being in order, Horse Cave, Gainville and Drake's Creek Church were put in nom-

ination. By balloting, it was determined to hold the next meeting at Horse Cave, on the first Friday and Saturday in November next. Next in order was to receive the reports of the committees. The Committee on Exhibition made the following report:

There are on exhibition from T. G. Newman, Chicago, Ill., the following: Bingham smokers; yellow comb foundation; Van Dusen's bee feeders; King's Text-Books; glass honey jars; Emerson's binders; Muth's bee veils; Alley's smokers; Cook's Manuals; honey knives; registering slates, &c.

W. COOK,
J. W. SCRIBNER,
W. W. WRIGHT.

The committee on the state of bee culture made a report as follows:

Your committee on the state of bee culture, beg leave to report that the good honey crop of last year has created much more interest in the culture of bees than has been felt in a long while, and the bee journals and effects of bee conventions have taught the people how easy it is to have plenty of honey, as well as to grow it in such attractive shapes as to advertise this industry, not only in the markets, but among people who have known bees all their lives and have not known before their capacity.

W. L. DULANEY, Ch'n,
ROBERT MUNFORD.

The committee to whom was referred the matter of selecting subjects for debate at the next meeting, made the following report:

We, your committee, would respectfully report the following questions for debate at the next meeting:

- Will it pay to raise bee pastures for bees alone?
- How can we prevent the bees raising brood in top story?
- How thick should we make our hives to winter bees in?
- How many colonies of bees can one man attend to properly?
- Shall we change our bees into new hives every spring to clean them out?
- How shall we preserve our surplus combs during winter?

H. W. SANDERS,
W. T. SEARS,
J. M. HOLMAN,
A. D. BOYD,
JAMES L. GARVIN.

It being on the programme for Hon. W. L. Dulaneys to make an address on "The Pleasure and Profit of Bee-Keeping," he entertained the audience for about 30 minutes in his happy and original style, making a speech that was as interesting to the children present as to those well versed in the art of bee-keeping. He said he had the finest pack of hounds in the State; he kept fox dogs as a sanitary measure; so far his bees had not been very profitable to him, as he had given all the honey he had taken from them to ladies to compensate them for the damages done their flower beds by his hounds.

The speech of Mr. Wm. (Fish) Cook, on "Bee-Keeping—the Past, Present and Future," was carefully prepared, and was received by the audience as a rich treat. He told all about bees, from the first one that was created down to the one he saw that morning extracting honey from a bloom of white clover. He thought there had been a wonderful improvement in bee-keeping and looked for a still greater improvement in the future.

On wintering bees, I. N. Greer, W. Cook, Bob Munford made appropriate remarks, each one telling their experience, all of which corresponded in the main.

Dr. Allen said he had better success marketing honey in small glass boxes; it sold more rapidly than in large quantities. Mr. W. T. Sears said he sold his honey in large



caps, in tin cans, and in any shape and quantity he could.

Dr. Whitlock, on the question "How far bee hives should be placed in the apiary," said it made no difference as to the distance. W. W. Wright said bees should be placed some distance apart. Dr. Allen said it was best to have them at least 6 or 8 feet apart. Mr. Munford said 12 or 15 feet apart would be the proper distance.

RAISING AND INTRODUCING QUEENS.

The President remarked that many methods had been tried, and that there was a difference of opinion as to the best mode of raising queens; said he had abandoned the small nuclei hive for queen-rearing, and used the Langstroth hive instead; said by putting in division boards he could raise three queens at the same time, in the Langstroth hive. Two division boards would divide the hive into three apartments, with as many places for the bees to enter; he had one entrance in front, one in back end, and one on the side of the hive. Each apartment should have a separate honey-board so the bees would not pass from one apartment to the other while manipulating them; said he formerly unqueened a hive, in order to get queen cells; the queen being removed, the instinct of self-preservation would force the bees to construct a number of queen-cells; the number depending upon the strength of the colony and richness of the bee pasturage. Said he would take a sheet of empty comb about two-thirds full and put it in the brood-nest of his choice colony of Italians. About ten days before he put them to rearing queen-cells; that he preferred a comb with plenty of larva and eggs in it, and the frame not being full of comb, they would construct their queen cells on the lower margin of the comb, and the cells were easily removed.

To get cells built he removed a strong colony to a new place and put an empty hive on the spot where the old hive stood; done this about 9 or 10 o'clock in the morning; he would then go to his choice hive and remove the comb that he had placed there with the adhering bees (being careful not to remove the queen), to the empty hive on the old stand, placing it so he could put empty comb on both sides of it; close up the hive and the bees that were out would make a strong swarm, and would in 8 or 10 days build and cap the cells. The nuclei should be set up a few days before the cells are ready to be removed, so the nuclei hive should be placed where it is to stand; then go to a strong hive and get a sheet of comb with brood, being careful not to have more brood than the bees can keep warm and cover; a small quantity of brood is best on the start. Put one or more combs, with adhering bees, in each apartment, leaving the queen in the old hive; get a large per cent. of young bees, as the old bees will return to the old stand. Young bees can be added to nuclei at any time by removing a comb from an old hive and shaking or brushing the bees off at the entrance. The young bees will remain and the old will return to the old stand.

On the tenth day he would remove the cells, by cutting them out with a knife, be-

ing careful to not cut or damage the cell; said he cut an inch or more from the cell; he then cut a piece of comb corresponding in size with the one the cell was on, out of the center of the brood comb in the nuclei, and introduced the cell in its stead, he then closed up the nuclei. But before putting in the cell, destroy all queen cells with the point of a knife that are on the comb; in a few days the queen would hatch, and as soon as she commenced laying eggs she was ready to be introduced to any colony of bees desired. Said she was then what is called an untested queen, a pure Italian, but we don't know what kind of a drone she met, whether it was an Italian or black drone. To test a queen you must keep them until the brood hatches, and that will take about 21 days from the time the egg is laid. Said the swarming season was the best time of year to raise queens. It required experience to be successful in raising queens. Said queens could be raised whenever the weather was warm and there was honey in the flowers and drones in the hive.

He introduced his queens by putting them in a wire cage and hanging the cage between the brood-combs. Of course the queen to be superseded has been removed and all queen cells destroyed. He would release the queen in 12 to 20 hours, by removing the stopper from the mouth of the cage, and tying a piece of newspaper saturated with honey on both sides, over the mouth of the cage, and hanging the cage in the hive; the bees would cut the paper off and release the queen; he preferred to release her about sunset, as the bees were more quiet then.

After adopting the following resolutions the Association adjourned to meet at Horse Cave on the first Friday and Saturday in November next.

Resolved, That we tender the thanks of the Association to the good people of Glasgow Junction and vicinity for their hospitality and kindness displayed on the occasion.

Resolved, That the Glasgow Times, Bowling Green Pantagraph, Farmers Home Journal, and the AMERICAN BEE JOURNAL be requested to publish the proceedings of this meeting.

N. P. ALLEN, *Pres.*

H. W. SAUNDERS, *Sec'y.*

Our Letter Box.

Chenango Co., N. Y., May 22, 1878.

"Our 52 colonies of bees have destroyed their drone brood, and have driven out their drones, in consequence of honey dearth, caused by our late cold weather. Fruit trees bloomed about 25 days sooner than usual, and raspberries, locust, and some other flowers of less importance, promised to follow in quick succession; but they are so injured by frost that they will be but very little earlier than they usually are.—Bees were making preparations to swarm, and we should have had some issue had the weather been fine, about May 20. They will not swarm until June 25th, if they do at all. We expect white clover about the first of June. We shall work our bees for honey, and prevent swarming as much as possible."

CHAS. G. DICKINSON.

New Canton, Ill., May 16, 1878.
 "The JOURNAL grows better and better every month. No bee-man can afford to do without it."
 JOHN BARFOOT.

Marcellus, N. Y., May 14, 1878.
 "The hills were covered with snow on the 12th inst.; the thermometer stood at 27° Fahrenheit."
 N. N. BETSINGER.

Platteville, Wis., April 13, 1878.
 "Very cold; heavy frost this morning; thermometer 25 above zero. Bees have had a poor time of it on the fruit blossoms; too cold, and rain."
 E. FRANCE.

Carson City, Mich., April, 12, 1878.
 "My 170 colonies wintered well; the season is 6 weeks ahead of anything for 7 years. Swarming will commence by May 1st, if this weather continues."
 HIRAM ROOP.

Marengo, Ills., May 16, 1878.
 "Season has been good for fruit blossoms which have now lasted three weeks, but are about done, and bees are killing drones."
 C. C. MILLER.

West Chester, Pa., April 30, 1878.
 "The long storm has prevented the bees from gathering much honey from the apple blossoms, and these are now about over. I had several ready to swarm when the storm commenced, but they have changed their arrangements and broken up."
 E. PENN WORRALL.

Lawson, Ray Co. Mo., April 25, 1878.
 "Bees are doing well here this spring.—One of my neighbors had a large swarm to come out on April 17; not thinking it a natural swarm, returned it to the same hive, and on the next day they came out and went to the woods. I then made an examination, and found the hive full of brood, in all stages, and several queen cells sealed over. I have 150 colonies very strong."
 J. L. SMITH.

Hillsboro, Ill., May 14, 1878.
 "On the 14th of March last, pursuant to previous notice, those interested in the culture of bees, in this and adjoining counties, met in this city and organized a Bee-keepers' Association by adopting a constitution and by-laws, and the following officers for the ensuing year, viz: I. B. Shimer, President; E. Armstrong, Vice President; Wm. K. Jackson, Secretary and Wooten Harris, Treasurer. Twenty-four persons gave their names as members."
 W. K. JACKSON, Sec'y.

Strawtown, Ind., Jan. 21, 1878.
 "In the JOURNAL for February, 1877, I gave a description of my cellar for wintering bees. In the warm weather of that month I gave the bees a flight. They remained out a week or more, and flew every day. The 2 nuclei started brood, as did all the colonies. When the weather turned cold again, about the first of March, all were put back in the cellar, where they remained till the last day of March. When they were taken out again, both nuclei and

2 colonies were dead. They had suffered more during March than all the time before. While out in February, they started brood, and the food taken to feed them had decayed till all were more or less depleted in numbers. We transferred the blacks that we bought about Christmas, while they were out in February, and killed their queens and united them with weak colonies of Italians, so as to have them Italianized early. The cellar was a success in comparison with our former efforts in wintering.—Out of about 50 colonies, only 2 were lost; most of them came out in very fine condition. I sold 10 of them to a neighbor for \$120 and bought 20 of Mrs. Grimm for the same amount, and never bought as strong colonies before, and never dealt with anyone more prompt or accommodating. I commenced the season with about 55 colonies, and sold some 20 during the summer, making about \$250 worth of sales altogether. We also sold about 500 lbs. of honey and have wintered 100 colonies in the cellar. We also have our nuclei, about 40 in number. All are wintering very nicely, so far. We aim to take our nuclei through, so as to commence queen rearing in the spring, just as it stopped in the fall. Our comb honey was readily sold at 20c., at our county seat, beside honey said to be from California. They preferred ours after trying both."
 JOHN ROOKER.

Wrightstown, Wis., May 4, 1878.
 "After being burnt out last summer, I again rebuilt my dwelling house, and made a large cellar with double walls of brick and stone; thinking I had a sure thing for wintering my bees. But it was late before I got it done, and the fall being rainy, I could not get it sufficiently dry; but I run the risk of the damp, and put 43 colonies into it, all in splendid condition, and lost all but 2. The queens seemed to be the first to die. My cellar was well ventilated, and the temperature even. I covered them with quilts and filled the caps with fine, dry straw. It was either the scent of the lime and cement, or the coloring in the cloth with which the quilts were made of. I have purchased some more hybrids of the widow Grimm, and intend to fill them up again this summer."
 CHAS. R. CLOUGH.

Woodman, Wis., April 22, 1878.
 DEAR EDITOR:—"Your pamphlet on 'Honey as Food and Medicine' is at hand. It is a step in the right direction. What we most want now is a market or demand for our product, for no one will care to keep bees long after keeping them ceases to pay, so that is what we are all after. I raised, last season, 6000 lbs. of honey, and have sold 4000 lbs. of it in my home market. I find the great drawback with extracted honey is to convince the people it is pure, when you sell it to them for less than you do comb. It looks suspicious. I have often been asked how it was that I could do all the extra work of extracting, &c., and then sell it so much less. I have one customer that has bought honey of me for 3 years, yet every little while he wants to know what I put in my honey to make it as good as comb honey, and yet sell it so

cheap. When I explain the process, and saving in comb, most men will understand and accept the explanation. I have been thinking of getting some circulars printed with some appropriate heading like this, perhaps, 'To the lovers of pure honey;' and then go on and explain the process of extracting, and the advantages, and leave them in the stores for distribution, endeavoring to post the public as to why we could furnish a pure article of extracted cheaper than comb honey." H. F. WALTON.

Baraboo, Wis., May 9, 1878.
"Bees have done well until now: cold today, very. My Italians threw off a large swarm the 5th, and that without stimulation. Bees are strong. Drones have been flying for two weeks." WALLACE PORTER.

Dundee, Ill., May 24, 1878.
"We have been literally over run with orders, and have worked almost day and night. Our whole page advertisement in the AMERICAN BEE JOURNAL is the cause of it. It is the best investment we ever made. Look out for a "spread" next year." J. OATMAN.

Scott Co., Ill., May 25, 1878.
"Boxed 4 colonies April 15, 3 May 20; none worked in the boxes till the 21st. inst., and now combs are built to the bottom in many of them. The section boxes, put on in trays or crates, seem most attractive to the bees and are ahead. Perhaps they are more accessible. White clover is abundant." WM. CAM.

Waverly, Mo., May 10, 1878.
EDITOR AMERICAN BEE JOURNAL:—"It seems that you and 'Novice' don't altogether agree. I am more than pleased with the stand you have so promptly taken.—His erroneous ideas and conclusions have long been a source of annoyance to many practical and well-informed bee-keepers." ALSIKE.

Peoria, Wyoming Co., N.Y., May 8, 1878.
"Your pamphlet on Honey as Food and Medicine, was duly received. Thanks. It seems to be just the thing to open the eyes of both producer and consumer to the value of honey as an article of food, not as a luxury only, but a staple, supplied by nature in her most beautiful form—the nectar of flowers. It can but be received with favor by all lovers of this delicious sweet." C. R. ISHAM.

Stevensville, Mich., May 8, 1878.
"I wish to tell my experience in stopping bees from going to the woods. Twenty-five years ago, more or less, my father kept bees in Western New York, and having lost several swarms by their "lighting out," an old man told us to shoot among them. The next swarm was hived, but didn't act like staying, so I loaded my little shot gun and didn't have long to wait before out they came, and I kept ahead of them and fired away. Four shots in perhaps as many minutes caused them to alight, 6 or 8 rods from their starting place, and they were hived and did well. Another swarm undertook

to go, and got about 10 rods on their way before we got a shot into them. Ten rods farther another shot was fired, and they soon alighted on a tree and were hived and taken back. Oil up your old shot-guns, friends, load with powder and 'wad,' only, blaze away and report. A neighbor had a swarm come off the 6th inst."

A. C. OWEN.

Hamilton, Ills., May 6, 1878.
"Please inform N. C. Mitchell, through your paper, that his patent on division boards is useless and void. We used division boards with cloth or rubber edges in 1869 and ever since, and can prove it. His patent is too late for any purpose."

CH. DADANT & SON.

[True; but are not the rubber strips on these division boards worse than useless, friends Dadant? Certainly, we have no use for them! As before stated, let us repeat—simple division boards are neither patented nor patentable.—ED.]

Northville, Mich., May 11, 1878.
"The smoker came duly to hand, and works to a charm. Thanks for promptness. We have had bad weather during the last 3 weeks for the bees. It has rained nearly every day, and ended with a good frost last night. One of my neighbors lost 21 colonies of bees out of 50 since the 1st of April. He says that they dwindled away to a handful before the queens died, and some of them had brood in the cells when the queen died, but took no steps to raise another. Some of them would swarm out of the hive and go off. The combs are clean and good; some hives having 30 lbs. of honey in them after the bees were all dead. He wintered on the summer stands, without any protection."

RANSOM ALLEN.

Los Angeles, Cal., April 30, 1878.
"I have received your pamphlet on 'Honey,' and find it very interesting. My bees are mostly Italians, some hybrids, none blacks. I have, at present, about 90 colonies. They are doing first-rate. The copious rains we have had this season have produced a great abundance of wild flowers. The white sage is coming out finely, and will commence blooming in a week or two. We expect a good honey harvest, though, of course, not as large an aggregate as formerly, on account of the great loss of bees last year. The newspapers say, that out of 25,000 colonies of bees there were only between 5,000 and 6,000 left in the county at the beginning of this season."

WM. MUTH RASMUSSEN.

Ft. Worth, Texas, May 13, 1878.
"I am a reader of your valuable JOURNAL, and have learned to love it. I found one of my colonies without a queen this spring—killed by moving in wagon about 70 miles. We put in brood from a strong colony and raised a queen; she is doing but little good in an official capacity. I have sent for an Italian and hope to succeed better with that. I use the Langstroth hive, and the only trouble I find with it is, some-

times, a difficulty in getting out the frames without injuring the comb and bees, and the probability of killing bees in examination, &c., particularly in putting on the top or upper story, and the cover. Can you point to any hive with all the advantages of the Langstroth hive, with the additional advantages alluded to?"

ALBERT L. RUST.

[Yes; the new Langstroth with manipulating side, described elsewhere in this number of the JOURNAL, "fills the bill," exactly. There is no necessity of killing a bee; and no good bee-keeper will consent to use a hive whose general character may be summed up by being called a "bee-killer."—Ed.]

Farmington, Minn., May 4, 1878.

"My bees, 51 swarms, wintered safely, and the season being early they are unusually strong for this time of the year. I am glad the reputation of the black bee is gradually taking its proper place. When I read in the JOURNAL friend Alley's and others' glowing description of the merits of the Italians, I think there must be one of two things: either they have different Italian bees, or I have a better race of black bees. In poor seasons for honey, the black bees always do the best." L. E. DAY.

Jonesboro, Ills., May 3, 1878.

"I began the season with 12 colonies, bought 6, transferred all but 3, and increased to 24 by natural swarming. My first 2 swarms came off a little over 3 weeks ago; they were very large. I put them in 2-story Simplicity hives. One swarm has filled both upper and lower story, in all 18 frames, 8 of which are filled with honey, which is being capped over. The honey is obtained from the tulip trees, white clover and raspberry. The two latter are just in their prime. The other colonies are doing equally well, according to their size. Is that not an encouraging prospect for a beginner? This is my first season of bee keeping for profit."

W. J. WILLARD.

[Yes, it is quite a flattering report. All beginners cannot expect to do as well.—Ed.]

Louisville, Kansas, May 21, 1878.

"I commenced the season with 3 colonies, (hybrids), have increased by natural swarming to 8 colonies. The first swarm came off on the 25th of March, and without ceremony left for the woods. The season here, so far, has been very good; bees are now carrying in honey and pollen from the raspberry, which is plentiful here; when that fails, I suppose they will take a rest, as forage is scarce during the month of June, and presume they will dwindle considerably until the prairie flowers come into bloom. I hived a second swarm 10 days ago. This morning I found the queen outside the hive, dead, with no eggs or brood in any of the cells, and very few bees, although, when hived there was not less than 3 quarts. I see hundreds of dead workers, and some drones around some of my other hives, and cannot account for

their rapid dwindling, unless it was these bees trying to incorporate themselves with other colonies, and have been destroyed.—And again, how is it that there were no eggs in any of the cells, presuming the young queen that led off the swarm was fertile? What little knowledge I have of bee-keeping, I owe to that most excellent publication, the AMERICAN BEE JOURNAL." JAS. D. CHADWICK.

Delaware Co., Pa., May 16, 1878.

"I have 41 colonies of bees, and my brother 8; they are all in very fine condition. I have 30 in Dr. Worrall's Centennial hive. I have 4 different hives in my apiary, but prefer his. I have the old and new American, but think they do not winter as well as in Centennial hives. I like my extractor very much, and thank friend Muth for introducing such a valuable machine.—I think every bee-keeper should have one. I had one colony commence to rob the other, the 28th of April. The colony that was robbed did not try to resist the robbers. Both colonies were very strong. The weather has been very unfavorable for this last week, that is, from the 8th to the 16th of May; if I had not fed some strong colonies, they would have perished. But they were carrying honey from white clover, for the first, to-day. Will give you full report of bees and honey crop this fall."

J. HALBERT WILLIAMSON.

Delhi, Jersey Co., Ill., April 15, 1878.

"With the spring again returns active interest in our bees. Those who keep their bees principally for the money they make out of them, are beginning to try to peer into the future, wanting to know what the summer will bring forth, what the prospect is for a good honey crop, and the profit they will probably realize on their bees. They, like their bees, are getting ready for the gathering of the harvest. Everything is done that should be done at this season of the year. New hives are made and well painted. Honey boxes are stored in a convenient place, to be ready when needed, and all the hives have been examined, to ascertain if any were queenless. The busy time is now just about beginning, both with bees and bee-keepers. Already we have many young bees hatched and flying, and drones hatched and many more capped. Our queens are fast filling their combs with brood, and if the remarkably early spring continues we shall soon start nuclei. We have wintered our bees on the summer stands, and in opening them, this spring, was very much surprised to see how little honey they had consumed, owing partly, we think, to the very mild winter, and partly to the hive we use. And right here, as you have the advertisement in your JOURNAL, I would say a word in favor of this hive: Armstrong's Centennial, I believe, is the best hive in use. It is perfectly adapted for all purposes. In using it, there is no need of nucleus hives, as they are very easily converted into nucleus hives, and if necessary, two can dwell in one of them, separated by means of a division board. By means of side sections, bees are almost forced to make box honey;

W. O. LANGDON, M. D.

"To answer lots of questions let me say, the term 'dollar queens' is used in contradistinction to 'tested queens.' They are not tested, but shipped as soon as fertile. By offering 'pure Italian queens' we simply meant queens that were reared from mother of undoubted purity, and possessing in some degree the most desirable qualities of the Italian race. While it was our aim to sell queens at a low price, reared from the choicest stock obtainable, we could not guarantee pure fertilization. We may add, however, that during the past 3 years, while there has always been a few black bees in our immediate vicinity, fully 80 per cent. of our young queens have been purely fertilized. We have always reared queens in full colonies, believing such a plan insures more vigorous and long lived stock; and we deem it to be of equal importance that all queens should be started from *just hatched* larvae, instead of larvae 3 days old. Our favorite method of introducing queens we give as follows: Remove the old queen, spray both the queen to be introduced and the bees and combs, thoroughly, with sweetened peppermint water, and put in the queen at once. Our idea of successful re-queening is: Don't let the bees know they are queenless. This method has given us the most unbounded satisfaction, and we use it even to introduce imported queens. With us, it saves time, trouble and disappointment." HERBERT A. BURCH.

TERMS OF SUBSCRIPTION.

Single subscription, one year.....	\$2 00
Two subscriptions, sent at the same time.....	3 50
Three " " " "	5 00
Six " " " "	9 00

All larger clubs at the same rate.

RATES FOR ADVERTISING.

1	month per line, of Ag te type.....	20	cents.
2	.....	15	“
3	.....	12	“
6	.....	10	“

Fourteen Lines make one inch in Length of Column.

No advertisement received for less than \$1.00.

Cash in advance for all transient advertisements. Bills of regular advertisers payable quarterly. We adhere strictly to our printed rates.

Address all communications and remittances to

974 West Madison St. CHICAGO, ILL.

TO CORRESPONDENTS.

When changing a post-office address, mention the old address as well as the new one.

We send the JOURNAL until an order for discontinuance is received at this office, and arrearages are all paid.

We will give Hill's work on "Chicken Cholera" (price 50 cents), to any one desiring it, as a premium for two subscribers.

We do not send goods by C. O. D., unless sufficient money is sent with the order to pay express charges both ways.

When ordering Extractors, give outside dimensions of frame or frames to be used, length of top-bar, width and depth of frame just under top-bar.

In consequence of the dearth of small currency in the country, we will receive either one, two or three cent stamps, for anything desired from this office.

Strangers wishing to visit our office and Museum of Implements for the Apiary, should take the Madison street-cars (going west). They pass our door.

Additional copies can be made to clubs at any time at the same rate. Specimen copies, Posters, and Illustrated Price List sent free upon application, for canvassing.

Remit by post-office money-order, registered letter or bank-draft, made payable to Thomas G. Newman & Son, so that if the remittance be lost it can be recovered.

We will send a tested Italian Queen to any one sending us four subscribers to THE AMERICAN BEE JOURNAL with \$8.00. Premium Queens will in every case be tested.

Write name and post-office address plainly. If there is no express office at your post-office address, be sure to give your nearest express office when ordering anything by express. Give plain directions how goods are to be sent.

Seeds or samples of merchandise can be mailed for one cent per ounce. Printed matter one cent for every two ounces. These must be tied up; if pasted, they are subject to letter postage. *Don't send us any small packages by express, that can just as well be sent by mail.*

For the convenience of bee-keepers, we have made arrangements to supply, at the lowest market prices, Imported or tested Italian Queens, Full Colonies, Hives, Extractors and anything required about the Apary. Our Illustrated Catalogue and Price List will be sent free, on application.

We have gotten up a "Constitution and By-Laws," suitable for local Associations, which we can supply, with the name and location of any society printed, at \$2 per hundred copies, postpaid. If less than 100 are ordered, they will have a blank left for writing in the name of the Association, etc. Sample copy will be sent for a three-cent postage stamp.

Bingham's Smoker Corner

Will contain a short card from some one every month. See Bellows Smoker card on another page.
T. F. BINGHAM.

Jackson, Mich., April 4, 1878.

FRIEND BINGHAM :- A few days ago I took the old long-nine smoker out to try her range. I removed the top from one of my hybrid stocks that was crowded with bees. They were of the kind that stand on their heads. In an instant, the tops of the frames were 2 inches thick with bees. I then got her in range, giving them a volley or two, and it was just sport to see the chaps scamper down between the frames. I am satisfied. It will be fun for me to go through 20 swarms per hour and remove queen-cells; beside all this, I shall save myself about three thousand stings this summer—quite an item. Bees have wintered to perfection. With respect, J. BUTLER.

Vermont, Fulton County, Ill., May 4, 1878.

MR. T. F. BINGHAM :- Dear Sir: Some time ago I sent \$1 to Thomas G. Newman & Son, Chicago, Ill., for one of your bellows smokers. In due time it arrived safe and sound, and I must tell you, I am perfectly satisfied with it. I have used the Quinby, Alley, and several others, but I consider yours ahead of all.
Yours truly, HARDIN HAINES.

Modesto, Cal., April 8, 1878.

T. F. BINGHAM :- Dear Sir: Your two last smokers came duly to hand, and as highly as I valued your Standard, I still value your large size more highly. Enclosed find order for two more of the large size.
J. F. FLORY.

Louisville, Ky., May 8, 1878.

Smokers universally admired. B. B. BARNUM.

Barren County, Ky., May 14, 1878.

FRIEND BINGHAM :- I have been using one of your bee smokers 12 months, which has given perfect satisfaction. I also ordered one for a friend, with which he is well pleased. Find enclosed \$1.00, for which send another Standard to Carter Lawrence, Smith's Grove, Warren county, Ky., and oblige
Your friend, C. G. MARTIN.

Coburg, Iowa, May 20, 1878.

FRIEND BINGHAM :- Please mail one of your standard smokers to H. Andrus, Red Oak, Iowa. Enclosed find \$1.00 for the same. I purchased one from friend Newman, and used it about three months almost daily, and now can say that I would not do without it, if it cost \$10 to replace it, should it be lost. You can perhaps fully appreciate the above from one that manufactures a "mouth-blowing smoker."
Respectfully yours, E. KIETCHMER.

Abrona, Mich., May 24, 1878.

Believing that my honey-knife would benefit beekeepers, I am making arrangements to have it made so as to have it advertised in the July JOURNAL, and for sale after July 1st.
T. F. BINGHAM.

Honey Markets.

NEW YORK.

There is no change in the condition of the market during the past month, and prices are still quotable as follows:

Buckwheat Honey—comb.....	8 to 12c
Strained or extracted.....	8 to 10c
Clover—in comb.....	15 to 25c
" extra.....	8 to 12c

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY.—The current quotations for good to choice comb, are ranging at 11 to 12c. $\frac{3}{4}$ lb; common and dark colored lots at 8 to 10c, and choice extracted honey at 8 to 10c.

BEESWAX.—In fair request at 24 to 26c. per lb. for prime choice yellow.

CINCINNATI.

COMB HONEY.—In small boxes, 15@20c. Extracted, 1 lb. jars, in shipping order, per doz., \$2.50; per gross, \$25.00. 2 lb. jars, per doz., \$4.50; per gross, \$50.00.
C. F. MUTH.

CALIFORNIA.

There are several small lots of new extracted honey on the market this week, selling at 10c@15c. The crop promises to be large and fine. Our quotations for old about the same as last month, viz: Comb, white, 12 $\frac{1}{2}$ @15c; dark to medium, 10c@12c. Extracted, dark, 6c @9c; choice, best, 10c@12c. Beeswax, 23c@31c.

STEARNS & SMITH, 423 Front St., San Francisco, Cal.

What Ailed the Bees?

Both parties to this unfortunate controversy having now had a hearing, we must decline further unpleasant details. The bees are dead, and as no amount of paper controversy will bring them to life, excuse us from devoting further space to it.

Appleton, May 20, 1878.

EDITOR JOURNAL :- "On my return from an all-winter's trip in Iowa, I find in THE AMERICAN BEE JOURNAL, on page 98 of March number, L. M. Roberts' report of his and S. J. Sawyer's bees, as though they were put into his anti-freezing house under the same conditions. Let us see:

First. Mr. Roberts' bees were only a few rods away, and carried in quietly by hand.

Second. Mr. Sawyer's bees were moved ten miles over frozen roads, snow several inches deep, thermometer below freezing, and kept shut in nearly two weeks, then taken to town on election day and offered at auction. When let out had the dysentery before putting into house. If Mr. Roberts had said that it was the moving at an unreasonable time, instead of the honey being taken so late, he would have stated nearer the facts, for not a drop of honey was taken from them after the 10th of August. Mr. R. B. Montgomery had five colonies in the same apiary, and extracted the same day, and treated precisely alike. He put them into his cellar quietly and wintered 4 out of 5. If there has been any dishonorable actions with Mr. Sawyer's bees, it has been done since they left my care, as I can prove all my manipulations of them by learners.

Third. About last New Years, Mr. Roberts told me that Mr. Sawyer's bees had been fed candy, by putting it on top of frames, and it had then commenced dissolving and ran among the bees.

Fourth. The 1st of October, 1877, all of my responsibility ceased, as Sawyer forcibly took his share of the bees away, contrary to express stipulations between us. I was to run them another season. I knew naught to the contrary until that time.

Fifth. Nineteen colonies of bees were selected from thirty-one—my share of the apiary—by Mr. Roberts. I did not know which he would take until he selected them; they all died alike.

Sixth. This spring Mr. Roberts told a friend of mine that he bought two colonies of Mr. Sawyer out of those selected from mine, both of which died, leaving 25 or 30 lbs. of their original honey to each colony.
G. W. MARYATT.

Fort Atkinson, May 27, 1878.

EDITOR AMERICAN BEE JOURNAL :- I do not like to appear in print, but Mr. Maryatt's statements are so devoid of truth, that justice to Mr. Roberts and the truth demands a word from me.

Want of time and space prevents a reply to all of Mr. M.'s remarks, but what I do state are proven facts. The latter part of October, 40 colonies of bees were moved from William Green's to Mr. Roberts', during mild weather, over soft muddy roads. A few days later, 19 colonies, awarded to me by arbitration out of 31 colonies of Mr. Maryatt's, were moved to Mr. Roberts' by himself, under like conditions of weather as the forty—no frozen ground, no snow. They were not shut up two weeks. When examined, some had 1 lb. honey, some 5 or 8 lbs., and the 2 colonies sold Mr. Roberts, the heaviest, had about 15 lbs. each of original honey, not 25 or 30 lbs. each. These bees had purifying flights before being put into winter quarters, and 1 colony was dead a few days before. Mr. Maryatt is very silent about the 32 colonies moved earlier in October from R. B. Montgomery's to C. J. Lee's. They had many good flights—even gathered a little honey—also were fed good comb-honey. They were put into winter quarters with Mr. Lee's bees, yet all died, and Mr. Lee did not lose any of his. Experienced apiarists say my bees did not die of dysentery.
S. J. SAWYER.

RARE CHANCE.

For sale, after the middle of July, Italian Bees—20 Hives—young Queens—worker comb—in perfect order, at \$5 per hive. To take the whole.

D. C. MILLETT, Holmesburg, Pa.

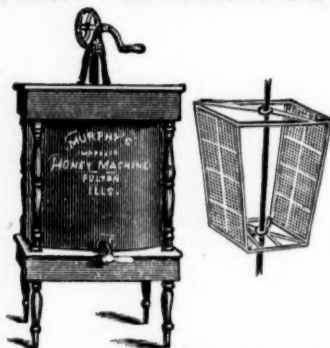
COMB FOUNDATION MACHINES.

12 inches wide.....	\$40 00
6 inches wide.....	25 00

On receipt of 10 cents, I will send a sample of the foundation made by the machine.

6-11 JOHN BOURGMEYER, Fond du Lac, Wis.

Murphy's Improved HONEY EXTRACTOR.



No. 1, \$15; No. 2, \$14; No. 3, \$13.50; No. 4, \$13.
Nos. 1, 2 and 3, take frames 14x20; No. 4, 10x20.

This Extractor received the Grand Medal and Diploma at the Centennial Exposition at Philadelphia, Pa., in 1876.

Also the best **Honey Knife** in the market.

Also Manufacturer of Langstroth Hives, Honey Boxes and Section Frames at reasonable rates.

Italian Bees and Queens for Sale

QUEENS from Imported Mothers not warranted purely fertilized, \$1.00 each. Sent as early as the season will admit of raising.

Address **R. R. MURPHY,**

Garden Plain, Whitesides Co., Ill.

Or Office of The American Bee Journal, Chicago.

1878. FOR SALE. 1878.

Pure Italian Queens.

Propagated in full Colonies. Purely fertilized—
Progeny tested—single Queens.....\$2 00
The same grade of Queen as soon as fertilized
and laying, each.....1 00
Safe arrival guaranteed. Also, full and nuclei
colonies. Address, **W. P. HENDERSON,**
4-9 Murfreesboro, Tenn.

DOLLAR QUEENS.



We shall this season, sell pure Italian
queens reared from the
CHOICEST STOCK

in the country, at the low price of one
dollar each. Queens shipped as soon as
fertile, and safe arrival guaranteed.
Order early, if you want queens early
in the season. We aim to please all our
customers.

HERBERT A. BURCH,
5-1f South Haven, Mich.

ITALIAN QUEENS.

All bred from imported mothers, of my own impor-
tations. Dollar queens ready in April, tested in May.
Full colonies and nucleus colonies; bee-keepers' sup-
plies of all kinds; comb-foundation, &c. Send for
price list. **PAUL L. VIALON,** Bayou Goula, La.

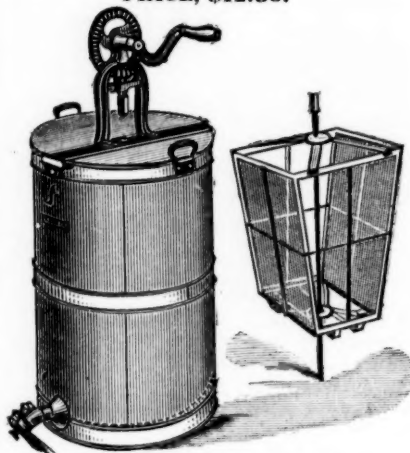
COMB FOUNDATION.

The undersigned will work up all wax sent him, in-
to comb-foundation, 5 cells to the inch, either thick
or thin, at 25 cents per pound or half the wax.

F. J. FARR,
Independence, Mo.

Muth's Honey Extractor,

PRICE, \$12.50.



The above cut gives a true idea of "Muth's all-metal Honey Extractor." It is a simple, durable and effective machine. The slanting sides of the revolving basket accommodating, with ease, the smallest frames as well as the Langstroth, American or Quinby, or even a piece of comb without a frame. Everyone knows the advantage afforded by a receptacle for honey in the bottom of the Extractor. A good light cover to keep out dust and flies, is equally advantageous. I shall be prepared to fill all orders for extractors at short notice. Parties ordering, should mention the size of the largest frames they wish to extract from, as it will accommodate all sizes.

CHAS. F. MUTH,

976 Central Ave., Cincinnati, O.

The Betsinger Prize Box.

Material for the original Prize Box, in lots of
1,000 or less, per 100.....\$1 00
In lots of 5,000 per 1000.....8 00
In lots of 11,000 and over, per 1,000.....5 00
Material for case to hold Prize Box, in lots of
1,000 or less, per 100.....3 00
In lots over 1,000, per 100.....2 50
Tin Separators, plain, per 100.....3 00

All the above is original with me.

Tin points for fastening glass in boxes, cut from
cross tin $\frac{3}{4}$ inch and $\frac{5}{8}$ inch in length, in lots of
less than 10,000, per 1,000.....\$.30
In lots less than 20,000, per 1,000......25
In lots more than 20,000, per 1,000......20

If the above is sent by mail, add 9 cents per 1,000.
4-9 **N. N. BETSINGER,** Marcellus, N. Y.

EARLY

ITALIAN QUEENS

FOR 1878.

The increasing demand for our choice Queens has
induced us to breed them the present season at the
following prices:

Pure Tested Queens, in April, May and June,
each.....\$3 00
In July, August and September.....2 00
A discount will be made on large orders.
Safe arrival guaranteed.

Nucleus.....4 00
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